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=> d his

     (FILE 'HOME' ENTERED AT 10:45:57 ON 18 MAR 2002)

     FILE 'MEDLINE, BIOSIS, HCAPLUS, WPIDS' ENTERED AT 10:46:08 ON 18 MAR 2002
                E CRAVATT B/AU
L1          143 S E3-7
                E SORENSEN E/AU
L2          581 S E3-E25
L3           93 S E44-52
                E PATRICELLI M/AU
L4           49 S E3-7
                E LOVATO M/AU
L5           48 S E3-8 OR E10-11
                E ADAM G/AU
L6         1479 S E3-20
                E ADAM GREGORY/AU
L7            8 S E3-4
                E ADAM GREG/AU
L8           20 S E3-4
L9         2342 S L1-L8
L10        5145 S PROTEOM?
L11          21 S L9 AND L10
                E WO2001077668/PN
L12           2 S E3
L13      609566 S SCREEN?
L14      400898 S PROBE#
L15       41572 S BIOACTIV? OR BIO ACTIV?
L16          22 S L14 AND L6
L17          12 S L16 AND (TARGET? OR L15 OR  ENZYM? OR PROTEIN#)
L18          30 S L11 OR L17
L19          17 DUP REM L18 (13 DUPLICATES REMOVED)
L20          40 S L11 OR L16
L21          25 DUP REM L20 (15 DUPLICATES REMOVED)
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17. A method for determining in a plurality of proteomic mixtures the presence of active target members of a group of related proteins in each of said proteomic mixtures, said related proteins related in having a common functionality for conjugation at an active site, said method comprising:

(1) combining each of said proteomic mixtures in wild-type form with a probe comprising a reactive functionality specific for said active site when active, under conditions for conjugation of said probe to said target members;

(2) determining the presence of target members conjugated with said probe in said proteomic mixtures;

(3) analyzing for the presence of target members conjugated with said probe using simultaneous individual capillary electrokinetic analysis or capillary HPLC;

whereby when said target members are conjugated to target members in said proteomic mixtures, the presence of active target members is determined.

19. A method for determining in a proteomic mixture the presence of active target members of a group of related enzymes, said related enzymes related in having a common functionality for conjugation at an active site, said method comprising:

(1) combining said proteomic mixture in wild-type form with a probe comprising a reactive functionality specific for said active site when active, under conditions for conjugation of said probe to said target members;

(2) combining said proteomic mixture after non-specific deactivation with said probe under said same conditions;

(3) determining the presence of target members conjugated with said probe in said proteomic mixtures in active and inactive form;

whereby when said probe is conjugated to at least one target member in said proteomic mixture in active form and in lesser amount in inactive form, the presence of active members is determined.

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=> fil medline biosis hcaplus wpids
FILE 'MEDLINE' ENTERED AT 10:56:43 ON 18 MAR 2002

FILE 'BIOSIS' ENTERED AT 10:56:43 ON 18 MAR 2002
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FILE 'WPIDS' ENTERED AT 10:56:43 ON 18 MAR 2002
COPYRIGHT (C) 2002 DERWENT INFORMATION LTD

=> d que l9;d his l10-
L1          143 SEA ("CRAVATT B"/AU OR "CRAVATT B F"/AU OR "CRAVATT BEN"/AU OR
                "CRAVATT BEN F"/AU OR "CRAVATT BENJAMIN F"/AU)
L2          581 SEA ("SORENSEN E"/AU OR "SORENSEN E A"/AU OR "SORENSEN E B"/AU
                OR "SORENSEN E C"/AU OR "SORENSEN E D"/AU OR "SORENSEN E E"/AU
                OR "SORENSEN E F"/AU OR "SORENSEN E H"/AU OR "SORENSEN E I"/AU
                OR "SORENSEN E J"/AU OR "SORENSEN E K"/AU OR "SORENSEN E L"/AU
                OR "SORENSEN E M"/AU OR "SORENSEN E M B"/AU OR "SORENSEN E
                N"/AU OR "SORENSEN E P"/AU OR "SORENSEN E P V"/AU OR "SORENSEN
                E R"/AU OR "SORENSEN E S"/AU OR "SORENSEN E T"/AU OR "SORENSEN
                E TODD"/AU OR "SORENSEN E V"/AU OR "SORENSEN E W"/AU)
L3           93 SEA ("SORENSEN ERIK"/AU OR "SORENSEN ERIK D"/AU OR "SORENSEN
                ERIK J"/AU OR "SORENSEN ERIK JOSEPH"/AU OR "SORENSEN ERIK
                LAHN"/AU OR "SORENSEN ERIK N"/AU OR "SORENSEN ERIK NIEL"/AU OR
                "SORENSEN ERIK S"/AU OR "SORENSEN ERIK SCHWARTZ"/AU)
L4           49 SEA ("PATRICELLI M"/AU OR "PATRICELLI M P"/AU OR "PATRICELLI
                MATTHEW"/AU OR "PATRICELLI MATTHEW P"/AU OR "PATRICELLI
                MATTHEW PETER"/AU)
L5           48 SEA ("LOVATO M"/AU OR "LOVATO M A"/AU OR "LOVATO M B"/AU OR
                "LOVATO M L"/AU OR "LOVATO M P"/AU OR "LOVATO M V"/AU) OR
                ("LOVATO MARTHA"/AU OR "LOVATO MARTHA A"/AU)
L6         1479 SEA ("ADAM G"/AU OR "ADAM G A"/AU OR "ADAM G B"/AU OR "ADAM G
                C"/AU OR "ADAM G D"/AU OR "ADAM G E"/AU OR "ADAM G F"/AU OR
                "ADAM G G"/AU OR "ADAM G H"/AU OR "ADAM G H M"/AU OR "ADAM G
                I"/AU OR "ADAM G I R"/AU OR "ADAM G K"/AU OR "ADAM G M"/AU OR
                "ADAM G P"/AU OR "ADAM G S"/AU OR "ADAM G V"/AU OR "ADAM G
                W"/AU)
L7            8 SEA ("ADAM GREGORY"/AU OR "ADAM GREGORY C"/AU)
L8           20 SEA ("ADAM GREG"/AU OR "ADAM GREG C"/AU)
L9         2342 SEA (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8)



     (FILE 'MEDLINE, BIOSIS, HCAPLUS, WPIDS' ENTERED AT 10:46:08 ON 18 MAR
     2002)
L10        5145 S PROTEOM?
L11          21 S L9 AND L10
                E WO2001077668/PN
L12           2 S E3
L13      609566 S SCREEN?
L14      400898 S PROBE#
L15       41572 S BIOACTIV? OR BIO ACTIV?
L16          22 S L14 AND L6
L17          12 S L16 AND (TARGET? OR L15 OR  ENZYM? OR PROTEIN#)
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L18 30 S L11 OR L17
L19 17 DUP REM L18 (13 DUPLICATES REMOVED)
L20 40 S L11 OR L16
L21 25 DUP REM L20 (15 DUPLICATES REMOVED)

FILE 'MEDLINE, BIOSIS, HCAPLUS, WPIDS' ENTERED AT 10:56:43 ON 18 MAR 2002

=> d bib ab 1-25

L21 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AN 2001:763323 HCAPLUS
DN 135:315598
TI Methods for **proteomic** analysis using activity based probes for target proteins
IN **Cravatt, Benjamin F.; Sorensen, Erik; Patricelli, Matthew; Lovato, Martha; Adam, Gregory**
PA Scripps Research Institute, USA
SO PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001077684	A2	20011018	WO 2000-US34187	20001215
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2000-195954	P	20000410		
	US 2000-212891	P	20000620		
	US 2000-222532	P	20000802		

OS MARPAT 135:315598
AB The present invention provides methods for analyzing proteomes, as cells or lysates. The anal. is based on the use of probes that have specificity to the active form of proteins, particularly enzymes and receptors. The probes can be identified in different ways. In accordance with the present invention, a method is provided for generating and screening compd. libraries that are used for the identification of lead mols., and for the parallel identification of their biol. targets. By appending specific functionalities and/or groups to one or more binding moieties, the reactive functionalities gain binding affinity and specificity for particular proteins and classes of proteins. Such libraries of candidate compds., referred to herein as activity-based probes, or ABPs, are used to screen for one or more desired biol. activities or target proteins.

L21 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
AN 2001:763309 HCAPLUS
DN 135:315597
TI Methods for bioactivity screening of candidate compounds using activity based probes
IN **Cravatt, Benjamin F.; Sorensen, Erik; Patricelli, Matthew; Lovato, Martha; Adam, Gregory**
PA Scripps Research Institute, USA
SO PCT Int. Appl., 118 pp.

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001077668	A2	20011018	WO 2000-US34167	20001215

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI	US 2000-195954	P	20000410
	US 2000-212891	P	20000620
	US 2000-222532	P	20000802

OS MARPAT 135:315597

AB The present invention provides methods for analyzing proteomes, as cells or lysates. The anal. is based on the use of probes that have specificity to the active form of proteins, particularly enzymes and receptors. The probes can be identified in different ways. In accordance with the present invention, a method is provided for generating and screening compd. libraries that are used for the identification of lead mols., and for the parallel identification of their biol. targets. By appending specific functionalities and/or groups to one or more binding moieties, the reactive functionalities gain binding affinity and specificity for particular proteins and classes of proteins. Such libraries of candidate compds., referred to herein as activity-based probes, or ABPs, are used to screen for one or more desired biol. activities or target proteins.

L21 ANSWER 3 OF 25 MEDLINE DUPLICATE 3
AN 2001354896 MEDLINE
DN 21197760 PubMed ID: 11300781
TI Profiling serine hydrolase activities in complex **proteomes**.
AU Kidd D; Liu Y; **Cravatt B F**
CS The Skaggs Institute for Chemical Biology and Department of Cell Biology, The Scripps Research Institute, La Jolla, California 92037, USA.
NC CA87660 (NCI)
SO BIOCHEMISTRY, (2001 Apr 3) 40 (13) 4005-15.
Journal code: A0G; 0370623. ISSN: 0006-2960.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200106
ED Entered STN: 20010625
Last Updated on STN: 20010625
Entered Medline: 20010621

AB Serine hydrolases represent one of the largest and most diverse families of enzymes in higher eukaryotes, comprising numerous proteases, lipases, esterases, and amidases. The activities of many serine hydrolases are tightly regulated by posttranslational mechanisms, limiting the suitability of standard genomics and **proteomics** methods for the functional characterization of these enzymes. To facilitate the global analysis of serine hydrolase activities in complex **proteomes**, a biotinylated fluorophosphonate (FP-biotin) was recently synthesized and shown to serve as an activity-based probe for several members of this

enzyme family. However, the extent to which FP-biotin reacts with the complete repertoire of active serine hydrolases present in a given **proteome** remains largely unexplored. Herein, we describe the synthesis and utility of a variant of FP-biotin in which the agent's hydrophobic alkyl chain linker was replaced by a more hydrophilic poly(ethylene glycol) moiety (FP-peg-biotin). When incubated with both soluble and membrane **proteomes** for extended reaction times, FP-biotin and FP-peg-biotin generated similar "maximal coverage" serine hydrolase activity profiles. However, kinetic analyses revealed that several serine hydrolases reacted at different rates with each FP agent. These rate differences were exploited in studies that used the biotinylated FPs to examine the target selectivity of reversible serine hydrolase inhibitors directly in complex **proteomes**. Finally, a general method for the avidin-based affinity isolation of FP-biotinylated proteins was developed, permitting the rapid and simultaneous identification of multiple serine peptidases, lipases, and esterases. Collectively, these studies demonstrate that chemical probes such as the biotinylated FPs can greatly accelerate both the functional characterization and molecular identification of active enzymes in complex **proteomes**.

L21 ANSWER 4 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
AN 2001:561475 BIOSIS
DN PREV200100561475
TI Direct visualization of serine hydrolase activities in complex **proteomes** using fluorescent active site-directed probes.
AU **Patricelli, Matthew P. (1)**; Giang, Dan K.; Stamp, Lisa M.; Burbaum, Jonathan J.
CS (1) ActivX Biosciences, 11025 N Torrey Pines Road, Suite 120, La Jolla, CA, 92037: mattp@activx.com USA
SO Proteomics, (September, 2001) Vol. 1, No. 9, pp. 1067-1071. print. ISSN: 1615-9853.
DT Article
LA English
SL English
AB The field of biochemistry is currently faced with the enormous challenge of assigning functional significance to more than thirty thousand predicted protein products encoded by the human genome. In order to accomplish this daunting task, methods will be required that facilitate the global analysis of proteins in complex biological systems. Recently, methods have been described for simultaneously monitoring the activity of multiple enzymes in crude **proteomes** based on their reactivity with tagged chemical probes. These activity based probes (ABPs) have used either radiochemical or biotin/avidin-based detection methods to allow consolidated visualization of numerous enzyme activities. Here we report the synthesis and evaluation of fluorescent activity based probes for the serine hydrolase super-family of enzymes. The fluorescent methods detailed herein provide superior throughput, sensitivity, and quantitative accuracy when compared to previously described ABPs, and provide a straight-forward platform for high-throughput **proteome** analysis.

L21 ANSWER 5 OF 25 MEDLINE
AN 2001339073 MEDLINE
DN 21133860 PubMed ID: 11237963
TI Experimental MR imaging-guided interstitial cryotherapy of the brain.
AU Tacke J; Speetzen R; **Adam G**; Sellhaus B; Glowinski A; Heschel I; Schaffter T; Schorn R; Grosskortenhaus S; Rau G; Gunther R W
CS Department of Diagnostic Radiology, University of Technology, Aachen, Germany.

SO AJNR. AMERICAN JOURNAL OF NEURORADIOLOGY, (2001 Mar) 22 (3) 431-40.
Journal code: 3AG; 8003708. ISSN: 0195-6108.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200106
ED Entered STN: 20010618
Last Updated on STN: 20010618
Entered Medline: 20010614
AB BACKGROUND AND PURPOSE: Hyperthermal ablation techniques such as laser or RF ablation require dedicated heat-sensitive MR imaging sequences for monitoring MR imaging--guided interventions. Because cryotherapy does not have these limitations, the purpose of this study was to evaluate the feasibility of MR imaging--guided percutaneous cryotherapy of the brain. METHODS: An experimental cryoprobe with an outer diameter of 2.7 mm was inserted into the right frontal lobe of 11 healthy pigs under MR imaging control. Freezing procedures were monitored by using an interventional 1.5-T magnet and a gradient-echo sequence with radial k-space trajectories, a fast T2-weighted single-shot spin-echo sequence, and a T1-weighted single-shot gradient-echo sequence. In three animals, the procedure was also monitored by using dynamic CT. A freeze-thaw cycle with a duration of 3 minutes was repeated three times per animal. Follow-up MR images were obtained 3, 7, and 14 days after cryotherapy by using conventional MR sequences. Six animals were killed 7 days after intervention, and five animals were killed 14 days after intervention. The brains were sectioned, and the histologic findings of the lesions were compared with the MR imaging appearance. RESULTS: No artifacts due to the **probe** were observed on the MR images or CT scans. The ice formation (mean diameter, 12.5 mm) was very well delineated as a signal-free sphere. MR monitoring of the freezing procedure yielded a significantly higher ice:tissue contrast than did CT. The size of the ice ball as imaged by MR imaging and CT during the intervention correlated well with the MR imaging appearance of the lesions at the 14-day follow-up examination and with the histologic findings. Histologically, coagulation necrosis and gliosis were found, surrounded by a transition zone of edema and a disrupted blood-brain barrier, corresponding to a contrast-enhancing rim around the lesions on follow-up MR images. CONCLUSION: MR imaging-guided cryotherapy of the brain is possible and allows a precise prediction of the resulting necrosis. MR imaging of the freezing process does not require heat-sensitive sequences and is superior to CT for monitoring of cryoablation.

L21 ANSWER 6 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
AN 2001:514429 BIOSIS
DN PREV200100514429
TI Mapping active site space and reactivity in complex **proteomes.**
AU **Cravatt, Benjamin F. (1); Adam, Gregory C.; Sorensen, Erik J.**
CS (1) Departments of Cell Biology and Chemistry, Skaggs Institute for Chemical Biology, Scripps Research Institute, 10550 N. Torrey Pines Rd., La Jolla, CA, 92037: cravatt@scripps.edu USA
SO Abstracts of Papers American Chemical Society, (2001) Vol. 222, No. 1-2, pp. BIOL137. print.
Meeting Info.: 222nd National Meeting of the American Chemical Society Chicago, Illinois, USA August 26-30, 2001 American Chemical Society . ISSN: 0065-7727.
DT Conference
LA English

SL English
AB The field of **proteomics** aims to characterize dynamics in protein function on a global scale. However, several classes of enzyme are subject to posttranslational forms of active site-directed regulation, limiting the utility of conventional **proteomics** techniques for the characterization of these proteins. Recently, we have initiated a research program aimed at generating chemical probes that interrogate the status of enzyme active sites in crude **proteomes**, thereby facilitating the functional characterization of enzymes in samples of high complexity. We will describe our efforts to map active site space and structure for several enzyme classes that collectively segregate into two general categories: 1) enzymes for which **proteomics**-compatible, active site-directed affinity agents are well-defined, and 2) enzymes for which **proteomics**-compatible, active site-directed affinity agents are currently lacking.

L21 ANSWER 7 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6
AN 2001:492117 BIOSIS
DN PREV200100492117
TI Redirecting the specific reactivity of a natural product and its application to functional **proteomics**.
AU Tamiya, Junko (1); **Cravatt, Benjamin F.; Sorensen, Erik J. (1)**
CS (1) Department of Chemistry, Skaggs Institute for Chemical Biology, Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA, 92037: jtamiya@scripps.edu USA
SO Abstracts of Papers American Chemical Society, (2001) Vol. 222, No. 1-2, pp. BIOL90. print.
Meeting Info.: 222nd National Meeting of the American Chemical Society Chicago, Illinois, USA August 26-30, 2001 American Chemical Society . ISSN: 0065-7727.
DT Conference
LA English
SL English
AB Activity-based protein profiling aims to create chemical agents to profile changes in enzyme activity in complex **proteomes**. Combining this methodology with a natural product scaffold, a library of biotinylated analogs of the natural product fumagillin was constructed and tested against complex **proteomes**. Fumagillin is an angiogenesis inhibitor, which contains an electrophilic spiroexpoxide and a hydrophobic side chain. The spiroepoxide covalently modifies the metalloprotease methionine aminopeptidase-2 (MetAp-2). Variation of the side chain to both hydrophobic and hydrophilic moieties redirected this natural product, facilitating the specific labeling of a diverse number of proteins directly in complex **proteomes**.

L21 ANSWER 8 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7
AN 2001:491354 BIOSIS
DN PREV200100491354
TI Profiling the specific reactivity of the **proteome** with non-directed chemical libraries.
AU **Adam, Gregory C. (1); Cravatt, Benjamin F.; Sorensen, Erik J.**
CS (1) Department of Chemistry, Scripps Research Institute, 10550 N. Torrey Pines Rd., La Jolla, CA, 92037: gadam@scripps.edu USA
SO Abstracts of Papers American Chemical Society, (2001) Vol. 222, No. 1-2, pp. BIOL84. print.
Meeting Info.: 222nd National Meeting of the American Chemical Society

Chicago, Illinois, USA August 26-30, 2001 American Chemical Society . ISSN: 0065-7727.
DT Conference
LA English
SL English
AB Through screening the **proteome** with chemical probes bearing functionalities common to organic synthesis but underutilized in biology, proteins or classes of proteins susceptible to new forms of inactivation may be discovered. A library of biotinylated sulfonates was synthesized and its members applied to complex **proteomes** under conditions that distinguish patterns of specific protein reactivity. Individual sulfonates exhibited unique profiles of **proteome** reactivity that in extreme cases appeared completely orthogonal to one another. Targets of the tagged sulfonate library include members of multiple structurally and mechanistically distinct enzyme families. Progress towards understanding the mechanisms by which the sulfonate probes react with their discrete enzyme targets will be reported. These data reveal that a non-directed approach towards probing the chemical reactivity of the **proteome** can readily identify compounds possessing selective and unanticipated biological activities.

L21 ANSWER 9 OF 25 MEDLINE DUPLICATE 8
AN 2001269063 MEDLINE
DN 21110454 PubMed ID: 11182321
TI Profiling the specific reactivity of the **proteome** with non-directed activity-based **probes**.
AU **Adam G C; Cravatt B F; Sorensen E J**
CS The Skaggs Institute for Chemical Biology, La Jolla, CA 92037, USA.
NC CA87660 (NCI)
SO CHEMISTRY AND BIOLOGY, (2001 Jan) 8 (1) 81-95.
Journal code: CNA; 9500160. ISSN: 1074-5521.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200105
ED Entered STN: 20010529
Last Updated on STN: 20010529
Entered Medline: 20010521
AB BACKGROUND: The field of **proteomics** aims to characterize dynamics in protein function on a global level. However, several classes of proteins, in particular low abundance proteins, remain difficult to characterize using standard **proteomics** technologies. Recently, chemical strategies have emerged that profile classes of proteins based on activity rather than quantity, thereby greatly facilitating the analysis of low abundance constituents of the **proteome**. RESULTS: In order to expand the classes of proteins susceptible to analysis by activity-based methods, we have synthesized a library of biotinylated sulfonate esters and applied its members to complex **proteomes** under conditions that distinguish patterns of specific protein reactivity. Individual sulfonates exhibited unique profiles of **proteome** reactivity that in extreme cases appeared nearly orthogonal to one another. A robustly labeled protein was identified as a class I aldehyde dehydrogenase and shown to be irreversibly inhibited by members of the sulfonate library. CONCLUSIONS: Through screening the **proteome** with a non-directed library of chemical **probes**, diverse patterns of protein reactivity were uncovered. These **probes** labeled protein targets based on properties other than abundance, circumventing one of the major challenges facing contemporary **proteomics** research. Considering further that the **probes** were found to

inhibit a target enzyme's catalytic activity, the methods described herein should facilitate the identification of compounds possessing both selective **proteome** reactivities and novel bioactivities.

L21 ANSWER 10 OF 25 MEDLINE
AN 2001177605 MEDLINE
DN 21096038 PubMed ID: 11169803
TI MR-guided percutaneous cryotherapy of the liver: in vivo evaluation with histologic correlation in an animal model.
AU Tacke J; **Adam G**; Haage P; Sellhaus B; Grosskortenhaus S; Gunther R W
CS Department of Diagnostic Radiology, University of Technology, Pauwelsstrasse 30, 52074 Aachen, Germany.. tacke@rad.rwth-aachen.de
SO JOURNAL OF MAGNETIC RESONANCE IMAGING, (2001 Jan) 13 (1) 50-6. Journal code: BEO; 9105850. ISSN: 1053-1807.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200104
ED Entered STN: 20010502
Last Updated on STN: 20010502
Entered Medline: 20010426
AB The purpose of this study was to evaluate the feasibility of MR-guided percutaneous cryotherapy of the porcine liver and to correlate the resulting tissue necrosis with MR imaging and histology. Using an MR-compatible, argon-based cryotherapy system (CryoHit; Galil Medical Ltd., Israel) with 2- and 3-mm diameter tapered cryotherapy **probes**, MR-guided percutaneous cryotherapy was performed in seven pigs (mean body weight, 40 kg) under general anesthesia in a short-bore magnet (1.5 T ACS NT; Philips, The Netherlands) using an ultrafast T2-weighted single-shot LoLo TSE sequence and a T1-weighted gradient-echo sequence. The frozen liver tissue was depicted accurately on fast T2- and T1-weighted sequences, providing precise delineation of the ablated tissue volume. On follow-up postcontrast MR controls, the cryolesions appeared avascular. They decreased in size compared with the initially frozen volume down to 70% at a 2-week follow-up. Histologically, a coagulation necrosis with a close correlation to the MR follow-up examinations was objectified. No cryotherapy-related complications occurred. J. Magn. Reson. Imaging 2001;13:50-56. Copyright 2001 Wiley-Liss, Inc.

L21 ANSWER 11 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:80581 BIOSIS
DN PREV200100080581
TI Chemical strategies for the global analysis of protein function.
AU **Cravatt, Benjamin F. (1); Sorensen, Erik J.**
CS (1) Department of Cell Biology, Skaggs Institute for Chemical Biology, Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA, 92037: cravatt@scripps.edu USA
SO Current Opinion in Chemical Biology, (December, 2000) Vol. 4, No. 6, pp. 663-668. print.
ISSN: 1367-5931.
DT General Review
LA English
SL English

L21 ANSWER 12 OF 25 MEDLINE DUPLICATE 9
AN 2000079544 MEDLINE
DN 20079544 PubMed ID: 10611275
TI Activity-based protein profiling: the serine hydrolases.

AU Liu Y; **Patricelli M P; Cravatt B F**
CS The Skaggs Institute for Chemical Biology, Department of Cell Biology, the Scripps Research Institute, La Jolla, CA 92037, USA.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1999 Dec 21) 96 (26) 14694-9.
Journal code: PV3; 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200001
ED Entered STN: 20000204
Last Updated on STN: 20000204
Entered Medline: 20000127
AB With the postgenome era rapidly approaching, new strategies for the functional analysis of proteins are needed. To date, **proteomics** efforts have primarily been confined to recording variations in protein level rather than activity. The ability to profile classes of proteins on the basis of changes in their activity would greatly accelerate both the assignment of protein function and the identification of potential pharmaceutical targets. Here, we describe the chemical synthesis and utility of an active-site directed probe for visualizing dynamics in the expression and function of an entire enzyme family, the serine hydrolases. By reacting this probe, a biotinylated fluorophosphonate referred to as FP-biotin, with crude tissue extracts, we quickly and with high sensitivity detect numerous serine hydrolases, many of which display tissue-restricted patterns of expression. Additionally, we show that FP-biotin labels these proteins in an activity-dependent manner that can be followed kinetically, offering a powerful means to monitor dynamics simultaneously in both protein function and expression.

L21 ANSWER 13 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:135106 BIOSIS
DN PREV200000135106
TI Identification of essential residues involved in the glutamate binding pocket of the group II metabotropic glutamate receptor as **probed** by the radiolabelled selective agonist, (3H)-LY354740.
AU Malherbe, P. (1); Broger, C. (1); Ohresser, S. (1); **Adam, G. (1)** ; Stadler, H. (1); Kemp, J. A. (1); Mutel, V. (1)
CS (1) Pharma Division, Preclinical CNS Research, F. Hoffmann-La Roche Ltd, CH-4070, Basel Switzerland
SO Society for Neuroscience Abstracts., (1999) Vol. 25, No. 1-2, pp. 975.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA October 23-28, 1999 Society for Neuroscience . ISSN: 0190-5295.
DT Conference
LA English
SL English

L21 ANSWER 14 OF 25 MEDLINE
AN 1999201581 MEDLINE
DN 99201581 PubMed ID: 10101365
TI [Experimental MRI-controlled cryotherapy of the brain with almost real-time imaging by radial k-space scanning].
Experimentelle MR-gesteuerte Kryotherapie des Gehirns mit nahezu Echtzeitdarstellung durch radiale k-Raum-Abtastung.
AU Tacke J; Speetzen R; Schorn R; Glowinski A; Grosskortenhaus S; **Adam G**; Rasche V; Rau G; Gunther R W
CS Klinik fur Radiologische Diagnostik, Medizinische Einrichtungen der RWTH Aachen.. tacke@rad.rwth-aachen.de

SO ROFO. FORTSCHRITTE AUF DEM GEBIETE DER RONTGENSTRAHLEN UND DER NEUEN BILDGEBENDEN VERFAHREN, (1999 Feb) 170 (2) 214-7.
Journal code: A7R; 9112114. ISSN: 0936-6652.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 199904
ED Entered STN: 19990426
Last Updated on STN: 19990426
Entered Medline: 19990415
AB PURPOSE: To test radial k-space scanning by MR fluoroscopy to guide and control MR-guided interstitial cryotherapy of the healthy pig brain. METHODS: After MR tomographic planning of the approach, an MR-compatible experimental cryotherapy **probe** of 2.7 mm diameter was introduced through a 5 mm burr hole into the right frontal brain of five healthy pigs. The freeze-thaw cycles were imaged using a T1-weighted gradient echo sequence with radial k-Space scanning in coronal, sagittal, and axial directions. RESULTS: The high temporal resolution of the chosen sequence permits a continuous representation of the freezing process with good image quality and high contrast between ice and unfrozen brain parenchyma. Because of the interactive conception of the sequence the layer plane could be chosen as desired during the measurement. Ice formation was sharply demarcated, spherically configurated, and was free of signals. Its maximum diameter was 13 mm. CONCLUSIONS: With use of the novel, interactively controllable gradient echo sequence with radial k-space scanning, guidance of the intervention under fluoroscopic conditions with the advantages of MRT is possible. MR-guided cryotherapy allows a minimally-invasive, precisely dosable focal tissue ablation.

L21 ANSWER 15 OF 25 MEDLINE
AN 1999284532 MEDLINE
DN 99284532 PubMed ID: 10354485
TI The genotype and epigenotype synergize to diversify the spatial pattern of expression of the imprinted H19 gene.
AU Lin W L; He X B; Svensson K; **Adam G**; Li Y M; Tang T W; Paldi A; Pfeifer S; Ohlsson R
CS Department of Animal Development and Genetics, Uppsala University, Norbyvagen 18A, S-752 36, Uppsala, Sweden.
SO MECHANISMS OF DEVELOPMENT, (1999 Apr) 82 (1-2) 195-7.
Journal code: AXF; 9101218. ISSN: 0925-4773.
CY Ireland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199908
ED Entered STN: 19990816
Last Updated on STN: 19990816
Entered Medline: 19990802
AB Little is known of how the genetic background effects the phenomenon of genomic imprinting. The H19 gene belongs to a cluster of imprinted genes on human chromosome 11. Here we show that the alternative splicing of a human H19 transcript is genotype-specific. Moreover, this variant transcript, which lacks exon 4, is either not found at all, is widely expressed or is confined to extra-villous cytotrophoblasts in first trimester placenta, depending on a combination of the genotype and the sex of the transmitting parent.

L21 ANSWER 16 OF 25 MEDLINE
AN 1998158355 MEDLINE

DN 98158355 PubMed ID: 9498590
TI MR-guided interstitial cryotherapy of the liver with a novel, nitrogen-cooled cryoprobe.
AU Tacke J; **Adam G**; Speetzen R; Brucksch K; Bucker A; Heshel I; Prescher A; van Vaals J J; Hunter D W; Rau G; Gunther R W
CS Department of Diagnostic Radiology, University of Technology, Aachen, Germany.
SO MAGNETIC RESONANCE IN MEDICINE, (1998 Mar) 39 (3) 354-60.
Journal code: MHR; 8505245. ISSN: 0740-3194.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199804
ED Entered STN: 19980507
Last Updated on STN: 19980507
Entered Medline: 19980430
AB The purpose of the study was to test a newly developed, MR-compatible, liquid nitrogen-cooled cryoprobe. The **probe** has an outer diameter of 3.5 mm and was specifically developed for percutaneous, MR-guided, interstitial cryotherapy. The **probe** was inserted percutaneously into the livers of 10 rabbits. The cryotherapy procedure was monitored with a surface coil in a 1.5 Tesla magnet using a gradient echo sequence. Follow-up examinations were performed 3 and 7 days after the freezing procedure using T1- and T2-weighted spin echo sequences. At 7 days the animals were sacrificed and the cryolesions were examined histologically. The cryoprobe enabled artifact-free MR imaging of the "iceball" formation during freezing of the rabbit liver. After 1 min of freezing, the iceball at the tip of the **probe** showed an average maximum diameter of 10.8 mm. No bleeding complications were observed during or after the freezing procedure. Histologic examination 7 days after cryotherapy confirmed that the liver lesions were the same size as had been predicted by the images of the acute iceball. This new, percutaneously inserted, MR-compatible, liquid-nitrogen cooled cryoprobe allows accurate, artifact-free MR imaging of interstitial cryotherapy.

L21 ANSWER 17 OF 25 MEDLINE
AN 1998247275 MEDLINE
DN 98247275 PubMed ID: 9586183
TI [Fiber optic measurements with the Bilitec **probe** for quantifying bile reflux after aboral stomach resection].
Fiberoptische Messungen mit einer Bilitec-Sonde zur Quantifizierung des Gallerefluxes nach aboraler Magenresektion.
AU Kronert T; Kahler G; **Adam G**; Scheele J
CS Abteilung Allgemeine und Viszerale Chirurgie, Friedrich-Schiller-Universitat Jena.
SO ZENTRALBLATT FUR CHIRURGIE, (1998) 123 (3) 239-44.
Journal code: Y5I; 0413645. ISSN: 0044-409X.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 199807
ED Entered STN: 19980723
Last Updated on STN: 19980723
Entered Medline: 19980715
AB Nonphysiological alkaline reflux after partial gastrectomy may produce a range of gastrointestinal disorders. The Bilitec **probe** is a fibroptic sensor that, for the first time, makes in vivo measurement of this reflux possible, by assay of spectrophotometric absorption of

bilirubin. We studied 20 patients who had undergone partial gastrectomy for benign peptic ulcer disease. Ten patients had Billroth II reconstruction and ten had Roux-en-Y reconstruction. In the Roux-en-Y Group we found almost complete control of symptoms and no objective evidence of alkaline reflux as measured by the Bilitec **probe**. In the Billroth II group we detected by the fiberoptic sensor significant bile reflux into the stomach remnant. Based on these results we recommend Roux-en-Y gastrojejunostomy as the method of choice for reconstruction after distal gastric resection.

L21 ANSWER 18 OF 25 MEDLINE
AN 96194043 MEDLINE
DN 96194043 PubMed ID: 8631262
TI Allele-specific in situ hybridization (ASISH) analysis: a novel technique which resolves differential allelic usage of H19 within the same cell lineage during human placental development.
AU **Adam G I**; Cui H; Miller S J; Flam F; Ohlsson R
CS Department of Animal Development and Genetics, University of Uppsala, Sweden.
SO DEVELOPMENT, (1996 Mar) 122 (3) 839-47.
Journal code: ECW; 8701744. ISSN: 0950-1991.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199607
ED Entered STN: 19960715
Last Updated on STN: 19960715
Entered Medline: 19960702
AB Precursory studies of H19 transcription during human foetal development have demonstrated maternally derived monoallelic expression. Analyses in extra-embryonic tissues, however, have been more equivocal, with discernible levels of expression of the paternal allele of H19 documented in the first trimester placenta. By refining the in situ hybridization technique we have developed an assay to enable the functional imprinting status of H19 to be determined at the cellular level. This assay involves the use of oligonucleotide DNA **probes** that are able to discriminate between allelic RNA transcripts containing sequence polymorphisms. Biallelic expression of H19 is confined to a subpopulation of cells of the trophoblast lineage, the extravillous cytotrophoblast, while the mesenchymal stroma cells maintain the imprinted pattern of monoallelic expression of H19 throughout placental development. This data demonstrates that the low level of paternal H19 expression previously detected in normal human placenta is not due to a random loss of functional imprinting, but appears to result from a developmentally regulated cell type-specific activation of the paternal allele. In addition, biallelic expression of H19 does not seem to affect the functional imprinting of the insulin-like growth factor II gene, which is monoallelically expressed at relatively high levels in the extra-villous cytotrophoblasts. These results imply that the allelic usage of these two genes in normal human placental development may not be directly analogous to the situation previously documented in the mouse embryo.

L21 ANSWER 19 OF 25 MEDLINE
AN 91160512 MEDLINE
DN 91160512 PubMed ID: 1848176
TI Negative regulation of transcription of the Saccharomyces cerevisiae catalase T (CTT1) gene by cAMP is mediated by a positive control element.
AU Belazzi T; Wagner A; Wieser R; Schanz M; **Adam G**; Hartig A; Ruis H

CS Institut fur Allgemeine Biochemie, Universitat Wien, Austria.
SO EMBO JOURNAL, (1991 Mar) 10 (3) 585-92.
Journal code: EMB; 8208664. ISSN: 0261-4189.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199104
ED Entered STN: 19910505
Last Updated on STN: 19910505
Entered Medline: 19910415
AB Transcription of the CTT1 (catalase T) gene of Saccharomyces cerevisiae is controlled by oxygen via heme, by nutrients via cAMP and by heat shock. Nitrogen limitation triggers a rapid, cycloheximide-insensitive derepression of the gene. Residual derepression in a cAMP-nonresponsive mutant with attenuated protein kinase activity (bcy1 tpk1w tpk2 tpk3) demonstrates the existence of an alternative, cAMP-independent nutrient signaling mechanism. Deletion analysis using CTT1-lacZ fusion genes revealed the contribution of multiple control elements to derepression, not all of which respond to the cAMP signal. A positive promoter element responding to negative control by cAMP was inactivated by deletion of a DNA region between base pairs -340 and -364. Upstream fragments including this element confer negative cAMP control to a LEU2-lacZ fusion gene. Northern analysis of CTT1 expression in the presence or absence of heme, in RAS2+ (high cAMP) and ras2 mutant (low cAMP) strains and in cells grown at low temperature (23 degrees C) and in heat-shocked cells (37 degrees C) shows that CTT1 is only induced to an appreciable extent when at least two of the three factors contributing to its expression (oxidative stress signaled by heme, nutrient starvation (low cAMP) and heat stress) activate the CTT1 promoter.

L21 ANSWER 20 OF 25 MEDLINE DUPLICATE 10
AN 91007766 MEDLINE
DN 91007766 PubMed ID: 2210741
TI Cystic fibrosis in Greece: typing with DNA **probes** and identification of the common molecular defect.
AU Balassopoulou A; Loukopoulos D; Kollia P; Devoto M; **Adam G**; Arvanitakis S; Hadjisevastou H
CS First Department of Medicine, University of Athens Medical School, Laikon Hospital, Greece.
SO HUMAN GENETICS, (1990 Sep) 85 (4) 393-4.
Journal code: GED; 7613873. ISSN: 0340-6717.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199011
ED Entered STN: 19910117
Last Updated on STN: 19910117
Entered Medline: 19901121
AB The relative frequency of the delta F508 mutation in the Greek population is 54.1%; this is similar to that reported in other Southern European populations and contrasts with the considerably higher frequencies encountered in Northern Europe and North America. The low frequency is in agreement with the linkage disequilibrium already reported between cystic fibrosis and haplotype B in this country. In contrast to the common association of pancreatic insufficiency with the homozygous delta F508 genotype, the present study revealed two homozygous children with no evidence of pancreatic failure.

L21 ANSWER 21 OF 25 MEDLINE
AN 90077431 MEDLINE
DN 90077431 PubMed ID: 2574150
TI Haplotypes in cystic fibrosis patients with or without pancreatic insufficiency from four European populations.
AU Devoto M; De Benedetti L; Seia M; Piceni Sereni L; Ferrari M; Bonduelle M L; Malfroot A; Lissens W; Balassopoulou A; **Adam G**; +
CS Laboratorio Genetica Molecolare, Istituto G. Gaslini, Genoa, Italy.
SO GENOMICS, (1989 Nov) 5 (4) 894-8.
Journal code: GEN; 8800135. ISSN: 0888-7543.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199001
ED Entered STN: 19900328
Last Updated on STN: 19950206
Entered Medline: 19900125
AB We examined the allele and haplotype frequencies of five polymorphic DNA markers in 355 European cystic fibrosis (CF) patients (from Belgium, the German Democratic Republic, Greece, and Italy) who were divided into two groups according to whether they were or not taking supplementary pancreatic enzymes. The level of linkage disequilibrium between each polymorphism and the CF mutation varied among the different populations; there was no significant association between KM.19 and CF in the Greek population. The distributions of alleles and haplotypes derived from the polymorphisms revealed by **probes** KM.19 and XV.2c were always different in patients with or without pancreatic insufficiency (PI) in all the populations studied. In particular, among 32 patients without PI, only 9 (or 28%) were homozygous for the KM.19-XV.2c = 2-1 haplotype (which was present in 73% of all the CF chromosomes in our sample) compared to 162 of 252 patients (or 64%) with PI. These findings are consistent with the hypothesis that pancreatic insufficiency or sufficiency may be determined by different mutations at the CF locus.

L21 ANSWER 22 OF 25 MEDLINE DUPLICATE 11
AN 88332299 MEDLINE
DN 88332299 PubMed ID: 2843603
TI Microtubule-associated cyclic AMP-dependent protein kinase in Drosophila melanogaster.
AU **Adam G**; Friedrich P
CS Institute of Enzymology, Biological Research Center, Hungarian Academy of Sciences, Budapest.
SO JOURNAL OF NEUROCHEMISTRY, (1988 Oct) 51 (4) 1014-22.
Journal code: JAV; 2985190R. ISSN: 0022-3042.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198810
ED Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19881019
AB Microtubules were prepared from head extracts of the adult fruit fly, Drosophila melanogaster, by one-step, taxol-assisted polymerization. The microtubular fraction displayed cyclic AMP-dependent protein kinase (protein kinase A) activity, as witnessed by endogenous protein phosphorylation and by protein kinase assay. Microtubule-bound protein kinase A amounts to 4-5% of total soluble kinase activity, which is almost an order of magnitude less than in mammals. The high-molecular-weight

microtubule-associated protein-2 (MAP-2), the main binding species for protein kinase A in mammalian brain microtubules, is not detectable in the fly system by protein staining and immunoblotting with anti-pig MAP-2 serum, as well as by hybridization of fly DNA with a cDNA **probe** for human MAP-2. Cyclic AMP removes a major part of the regulatory (R) subunit of the enzyme from Drosophila microtubules, as demonstrated by enzyme assay, autophosphorylation of R subunit, and quantitating cyclic AMP binding sites. It is proposed that permanently elevated cyclic AMP levels may elute protein kinase A from crucial intracellular binding sites, thereby interfering with signal transduction.

L21 ANSWER 23 OF 25 MEDLINE DUPLICATE 12
AN 88059471 MEDLINE
DN 88059471 PubMed ID: 3680462
TI Lectins as **probes** for the assay of rhabdovirus infections in plants.
AU **Adam G**; Heegard P; Bog-Hansen T C; Mundry K W
CS Institute for Biology, University of Stuttgart, F.R.G.
SO JOURNAL OF VIROLOGICAL METHODS, (1987 Sep) 17 (3-4) 263-75.
Journal code: HQR; 8005839. ISSN: 0166-0934.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198801
ED Entered STN: 19900305
Last Updated on STN: 19900305
Entered Medline: 19880115
AB Thirteen different, biotinylated plant lectins were tested for their ability to recognize specifically the glycoproteins of the two different plant rhabdoviruses potato yellow dwarf virus and eggplant mottled dwarf virus. All viruses were propagated on the same plant host species, Nicotiana rustica L. The lectin-binding to the viral proteins was tested after electrophoretic separation and transfer to nitrocellulose membranes. Besides purified virus also partially pure virus preparations were used for the tests, in order to determine the specificity. The lectins had been selected for specificities to either one of the following monosaccharides: mannose, glucose, galactose, N-acetyl-D-galactosamine, N-acetyl-D-glucosamine and fucose. In the test panel of thirteen lectins, seven were found to react with the viral glycoproteins. Among these, four (LCA, VFA, PSA, Con A) belonged to the mannosyl- or glycosyl-specific group. However, these four lectins reacted also with other host proteins when partially pure virus preparations were used as samples. The other three lectins (GSA2b, STA, WGA) were specific for N-acetyl-D-glucosamine and detected almost exclusively the viral glycoproteins. Two of these lectins, STA and WGA, were extremely suitable for virus-specific assays, since they did not react with glycoproteins in healthy controls that were identical or comparable in their electrophoretic mobility with the rhabdovirus glycoproteins. No binding to viral glycoproteins was observed with galactose-, N-acetyl-galactosamine- and fucose-specific lectins. The assay for rhabdovirus glycoproteins in plants with the lectins was approximately 8-16 times less sensitive than with virus-specific antibodies.

L21 ANSWER 24 OF 25 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1985-081585 [14] WPIDS
DNN N1985-061098
TI Sifting machine with wind channel and gas stream - has weighing zone, **probes** and evaluator to adjust gas stream for efficient sorting.
DC P43

IN **ADAM, G**; HAING, B; RUDOLF, W; SCHLINZIG, E
PA (FORT) VEB KOMB FORTSCHRIT
CYC 1
PI DD 216124 A 19841128 (198514)*
ADT DD 216124 A DD 1983-251027 19830518
PRAI DD 1983-251027 19830518
AB DD 216124 A UPAB: 19930925
The sifting machine has at the end of a wind sifting channel a taring zone formed by at least one **probe** in each of various planes. These **probes** are connected to a control device and the control device is in connection with a regulator for the gas stream in the wind sifting channel.

The whirled-up materials pass the **probes** of the taring zone which take up the vibrations and direct them to the control device. The values are compared to see whether the proportion of materials are sufficiently whirled up for separation and whether the loss of faulty-ejected materials lies within the given limits.

USE - The intensity of the gas stream can now be selected to ensure sufficient material separation whilst faulty discharge of materials is reduced to a minimum.

L21 ANSWER 25 OF 25 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1982-A3430J [48] WPIDS
TI Temp. variation measuring circuit for thermometric analysis - includes compensation loops for ambient temp. and fluid heat capacitance.
DC S03
IN **ADAM, G**; FARKAS, F; FEHER, I; KOVACS, F; LANYI, M; SAJO, I; SOLYMAR, K; UJVARI, J
PA (ALUT) ALUMINIUMIPARI TERVEZO; (MAAL-N) MAGYAR ALUMINIUMIPA; (VASI) VASIPARI KI
CYC 4
PI DE 3214947 A 19821125 (198248)* 26p
FR 2505519 A 19821112 (198251)
HU 27028 T 19830928 (198345)
AT 8201442 A 19910215 (199112)
PRAI HU 1981-1195 19810507
AB DE 3214947 A UPAB: 19930915
The circuit uses a temp. **probe**, dipping into the fluid and coupled via a temp. measuring device to one input of a difference current circuit. The output of the latter is fed via a storage stage to an adding or subtracting stage for combining the supplied voltage or current value with an electronic reference value dependant on the material.

The combined signal is compared with the direct output signal from the difference current circuit, with the obtained difference signal fed to a process control stage and/or a display unit. The junction between the temp. measuring device and the difference current circuit is coupled to a second comparator receiving a signal from a second temp. measuring **probe**, to supply an output corresp. to the fluid heat capacitance to the adding or subtracting stage.

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CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 13 March 2002 (20020313/ED)


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     (FILE 'BIOSIS' ENTERED AT 12:40:51 ON 18 MAR 2002)
                DEL HIS Y
L1          1809 S PROTEOM?
L2        132709 S PROBE#
L3        162261 S SCREEN?
L4         76196 S (BIOACTIV? OR BIO? (2W) ACTIV?)
L5         22271 S TARGET? (5A) (PROTEIN# OR MOL# OR MOLEC? OR ENZYM?)
L6            50 S L1 AND L2
L7            12 S L6 AND (L3 OR L4)
L8             3 S L5 AND L6
L9            12 S L7 OR L8
L10       106667 S LIGAND#
L11      2089161 S PROTEIN# OR ENZYM?
L12         2250 S L2 AND L10 AND L11
L13           43 S L12 AND  L5
L14        15136 S FUNCTION? (3A) ( GR##  OR GROUP#)
L15            2 S L13 AND L14
L16         1004 S ACTIVIT? (4A) L2
L17            0 S L13 AND L16
L18            2 S L13 AND CONJUGAT?
L19            3 S L13 AND LINK?
L20           19 S L8 OR L9 OR L15 OR L18 OR L19

     FILE 'BIOSIS' ENTERED AT 12:58:50 ON 18 MAR 2002

=> d bib ab it 1-19

L20  ANSWER 1 OF 19  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN   2002:193718  BIOSIS
DN   PREV200200193718
TI   Concept and prototype of protein-ligand docking
     simulator with force feedback technology.
AU   Nagata, Hiroshi (1); Mizushima, Hiroshi (1); Tanaka, Hiroshi
CS   (1) National Cancer Center Research Institute, 5-1-1, Tsukiji, Chuo-ku,
     Tokyo, 104-0045: hi-nagata@kddilabs.co.jp, hmizushi@ncc.go.jp,
     tanaka@cim.tmd.ac.jp Japan
SO   Bioinformatics (Oxford), (January, 2002) Vol. 18, No. 1, pp. 140-146.
     print.
     ISSN: 1367-4803.
DT   Article
LA   English
AB   A novel concept for a protein-ligand docking simulator
     using Virtual Reality (VR) technologies, in particular the tactile sense
     technology, was designed and a prototype was developed. Most conventional
     docking simulators are based on numerical differential calculations of the
     total energy between a protein and a ligand. However,
     the basic concept of our method differs from that of conventional
     simulators. Our design utilizes the force between a ligand and a
     protein instead of the total energy. The most characteristic
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function of the system is its ability to enable the user to 'touch' and sense the electrostatic potential field of a **protein** molecule. The user can scan the surface of a **protein** using a globular **probe**, which is given an electrostatic charge, and is controlled by a force feedback device. The electrostatic force between the **protein** and the **probe** is calculated in real time and immediately fed back into the force feedback device. The user can easily search interactively for positions where the **probe** is strongly attracted to the force field. Such positions can be regarded as candidate sites where **functional groups** of **ligands** corresponding to the **probe** can bind to the **target protein**. Certain limitations remain; for example, only twenty **protein** atoms can be used to generate the electrostatic field. Furthermore, the system can only use globular **probes**, preventing drug molecules or small chemical groups from being simulated. These limitations are the result of our insufficient computer resources. However, our prototype system has the potential to become a novel application method as well as being applicable to conventional VR technologies, especially to force feedback technologies.

IT Major Concepts
Biochemistry and Molecular Biophysics; Computer Applications (Computational Biology)

IT Chemicals & Biochemicals
protein

IT Methods & Equipment
force feedback device: laboratory equipment; software: computer software; tactile sense technology: analytical method, computer method; virtual reality technology: analytical method, computer method

IT Miscellaneous Descriptors
electrostatics; **protein-ligand** interaction

L20 ANSWER 2 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2002:193674 BIOSIS
DN PREV200200193674
TI A one-bead, one-stock solution approach to chemical genetics: Part 2.
AU Clemons, Paul A.; Koehler, Angela N.; Wagner, Bridget K.; Sprigings, Timothy G.; Spring, David R.; King, Randall W.; Schreiber, Stuart L. (1); Foley, Michael A.
CS (1) Howard Hughes Medical Institute, Harvard University, Cambridge, MA, 02138: sls@slsiris.harvard.edu, mfoley@infinitypharm.com USA
SO Chemistry & Biology (London), (December, 2001) Vol. 8, No. 12, pp. 1183-1195. http://www.elsevier.nl/inca/publications/store/6/0/1/2/8/1/index.htt. print.
ISSN: 1074-5521.
DT Article
LA English
AB Background: Chemical genetics provides a systematic means to study biology using small molecules to effect spatial and temporal control over protein function. As complementary approaches, phenotypic and **proteomic screens** of structurally diverse and complex small molecules may yield not only interesting individual **probes** of biological function, but also global information about small molecule collections and the interactions of their members with biological systems. Results: We report a general high-throughput method for converting high-capacity beads into arrayed stock solutions amenable to both phenotypic and **proteomic** assays. Polystyrene beads from diversity-oriented syntheses were arrayed individually into wells. Bound compounds were cleaved, eluted, and resuspended to generate 'mother plates' of stock solutions. The second phase of development of our technology platform includes optimized cleavage and elution conditions, a novel bead arraying method, and robotic distribution of stock solutions of small molecules into 'daughter plates' for direct use in chemical genetic assays. This library formatting strategy enables what we refer to as annotation

screening, in which every member of a library is annotated with biological assay data. This phase was validated by arraying and **screening** 708 members of an encoded 4320-member library of structurally diverse and complex dihydropyrancarboxamides. Conclusions: Our 'one-bead, multiple-stock solution' library formatting strategy is a central element of a technology platform aimed at advancing chemical genetics. Annotation **screening** provides a means for biology to inform chemistry, complementary to the way that chemistry can inform biology in conventional ('investigator-initiated') small molecule **screens**.

IT Major Concepts
Biochemistry and Molecular Biophysics; Equipment, Apparatus, Devices and Instrumentation; Methods and Techniques

IT Chemicals & Biochemicals
dihydropyrancarboxamides; protein: function

IT Methods & Equipment
annotation **screening**: Molecular Biology Techniques and Chemical Characterization, **screening** method; bead arraying method: Preparatory and General Laboratory Techniques, analytical method; chemical genetic assays: Molecular Biology Techniques and Chemical Characterization, genetic method; diversity-oriented synthesis: Synthetic Techniques, synthetic method; high-capacity beads: laboratory equipment; high-throughput method: Molecular Biology Techniques and Chemical Characterization, analytical method; phenotypic **screen**: Molecular Biology Techniques and Chemical Characterization, **screening** method; polystyrene beads: laboratory equipment; **proteomic screen**: Molecular Biology Techniques and Chemical Characterization, **screening** method

IT Miscellaneous Descriptors
chemical genetics; one-bead, one-stock solution approach; optimized cleavage conditions; optimized elution conditions

L20 ANSWER 3 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2002:167561 BIOSIS
DN PREV200200167561
TI Generating addressable protein microarrays with PROfusionTM covalent mRNA-protein fusion technology.
AU Weng, Shawn; Gu, Ke; Hammond, Philip W.; Lohse, Peter; Rise, Cecil; Wagner, Richard W.; Wright, Martin C.; Kuimelis, Robert G. (1)
CS (1) Phylos, Inc., 128 Spring Street, Lexington, MA, 02421: rkuimelis@phylos.com USA
SO Proteomics, (January, 2002) Vol. 2, No. 1, pp. 48-57. print. ISSN: 1615-9853.
DT Article
LA English
AB An mRNA-protein fusion consists of a polypeptide covalently linked to its corresponding mRNA. These species, prepared individually or en masse by in vitro translation with a modified mRNA conjugate (the PROfusionTM process), link phenotype to genotype and enable powerful directed evolution schemes. We have exploited the informational content of the nucleic acid component of the mRNA-protein fusion to create an addressable protein microarray that self-assembles via hybridization to surface-bound DNA capture **probes**. The nucleic acid component not only directs the mRNA-protein fusion to the proper coordinate of the microarray, but also positions the protein in a uniform orientation. We demonstrate the feasibility of this protein chip concept with several mRNA-protein fusions, each possessing a unique peptide epitope sequence. These addressable proteins could be visualized on the microarray both by autoradiography and highly specific monoclonal antibody binding. The anchoring of the protein to the chip surface is surprisingly robust, and the system is sensitive enough to detect sub-attomole quantities of displayed protein without signal amplification. Such protein arrays should

be useful for functional **screening** in massively parallel formats, as well as other applications involving immobilized peptides and proteins.

IT Major Concepts
Methods and Techniques; Molecular Genetics (Biochemistry and Molecular Biophysics)

IT Chemicals & Biochemicals
DNA; DNA capture **probes**; DNA microarrays: preparation, uses; mRNA [messenger RNA]: analysis; messenger RNA-polypeptide fusions: applications, preparation; messenger RNA-protein fusions: applications, preparation; monoclonal antibodies; nucleic acids; peptide epitopes; polypeptides; protein microarrays: preparation, uses; proteins: molecular analysis

IT Methods & Equipment
HPLC [high performance liquid chromatography]: liquid chromatography, purification method; PCR [polymerase chain reaction]: DNA amplification, in situ recombinant gene expression detection, molecular method, sequencing techniques; fluorescence laser scanning: Molecular Biology Techniques and Chemical Characterization, analytical method; phosphorimaging analysis: Imaging Techniques, analytical method; protein chips/biochips: laboratory equipment, preparation, uses

IT Miscellaneous Descriptors
PROfusion covalent messenger RNA-protein fusion technology: applications; genome sequencing projects: methodologies; **proteomics**

L20 ANSWER 4 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:542807 BIOSIS
DN PREV200100542807
TI The cloning of human genes using cDNA phage display and small-molecule chemical **probes**.
AU Savinov, Sergey N.; Austin, David J. (1)
CS (1) Department of Chemistry, Sterling Chemical Laboratory, Yale University, New Haven, CT, 06520: david.austin@yale.edu USA
SO Combinatorial Chemistry & High Throughput Screening, (November, 2001) Vol. 4, No. 7, pp. 593-597. print.
ISSN: 1386-2073.
DT Article
LA English
SL English
AB The cloning of genes based on protein function has become a powerful tool for protein discovery and should play an important role in **proteomics** in general. We have recently reported a technique for the functional identification of **protein targets** by combining traditional affinity chromatography with cDNA phage display. This procedure, referred to as display cloning, directly couples **biologically active** natural products to the gene of their **protein** cellular **target**. We now report the cloning of a human gene, the alpha domain of F1 ATP synthase, using a synthetic scaffold molecule which serves as a prototype for a diverse chemical library. The ability to select genes from cDNA libraries using **probes** from combinatorial libraries would greatly increase the number of small molecule/protein interactions that can be identified. This method might prove valuable in furthering but understanding of biology and its application toward drug development.

IT Major Concepts
Chemistry; Genetics; Methods and Techniques

IT Methods & Equipment
complementary DNA phage display: genetic method; small-molecule chemical **probes**: analytical method

IT Miscellaneous Descriptors
human gene cloning

ORGN Super Taxa

Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
human (Hominidae)
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

L20 ANSWER 5 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:497022 BIOSIS
DN PREV200100497022
TI Simplified sample preparation method for protein identification by matrix-assisted laser desorption/ionization mass spectrometry: In-gel digestion on the **probe** surface.
AU Stensballe, Allan; Jensen, Ole Norregaard (1)
CS (1) Department of Biochemistry and Molecular Biology, University of Southern Denmark, Odense University, Campusvej 55, DK-5230, Odense M: jenseno@bmb.sdu.dk Denmark
SO European Journal of Mass Spectrometry, (2001) Vol. 7, No. 2, pp. 111-121. print.
ISSN: 1469-0667.
DT Article
LA English
SL English
AB Identification and detailed characterization of complex mixtures of proteins separated by polyacrylamide gel electrophoresis (PAGE) require optimized and robust methods for interfacing electrophoretic techniques to mass spectrometry. Peptide mapping by matrix-assisted laser desorption/ionization (MALDI) time-of-flight mass spectrometry (TOF MS) is used as the first protein **screening** method in many laboratories because of its inherent simplicity, mass accuracy, sensitivity and relatively high sample throughput. We present a simplified sample preparation method for MALDI MS that enables in-gel digestion of protein samples directly on the MALDI MS metal **probe**. Removal of detergent and reagents as well as protein reduction and S-alkylation were performed prior to cutting of protein samples from the polyacrylamide gel slab. The general utility of this approach was demonstrated by on-**probe** digestion and MALDI MS peptide mapping of femtomole amounts of standard proteins isolated by sodium dodecyl sulfate (SDS) PAGE. A representative set of 47 human proteins obtained from a silver stained two-dimensional electrophoretic gel was analyzed by the new method and resulted in a success rate for protein identification similar to that obtained by the traditional protocols for in-gel digestion and MALDI peptide mass mapping of human proteins, i.e. approximately 60%. The overall performance of the novel on-**probe** digestion method is comparable with that of the standard in-gel sample preparation protocol while being less labor-intensive and more cost-effective due to minimal consumption of reagents, enzymes and consumables. Preliminary data obtained on a MALDI quadrupole-TOF tandem mass spectrometer demonstrated the utility of the on-**probe** digestion protocol for peptide mass mapping and peptide sequencing on this instrument. Automation of the on-**probe** protein digestion procedure and its combination with automated MALDI tandem mass spectrometry should be advantageous in **proteomics** research aimed at the systematic identification and analysis of large sets of proteins from electrophoretic gels.
IT Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques
IT Chemicals & Biochemicals
bovine beta-casein: Sigma, identification, peptide mapping, separation; bovine serum albumin: Sigma, identification, peptide mapping, separation; ovalbumin: Sigma, identification, peptide mapping, separation; proteins: identification, peptide mapping, separation
IT Methods & Equipment
API QSTAR Pulsar quadrupole time-of-flight mass spectrometer: MDS Sciex, laboratory equipment; Bio-Rad Mini-PROTEAN II electrophoresis

system: Bio-Rad, laboratory equipment; REFLEX reflectron time-of-flight mass spectrometer: Bruker Daltonics, laboratory equipment; matrix-assisted laser/desorption ionization mass spectrometry: analytical method, spectroscopic techniques: CB; polyacrylamide gel electrophoresis: gel electrophoresis, separation method; **probe** surface in-gel digestion: Preparatory and General Laboratory Techniques, sample preparation method

L20 ANSWER 6 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:491354 BIOSIS
DN PREV200100491354
TI Profiling the specific reactivity of the **proteome** with non-directed chemical libraries.
AU Adam, Gregory C. (1); Cravatt, Benjamin F.; Sorensen, Erik J.
CS (1) Department of Chemistry, Scripps Research Institute, 10550 N. Torrey Pines Rd., La Jolla, CA, 92037: gadam@scripps.edu USA
SO Abstracts of Papers American Chemical Society, (2001) Vol. 222, No. 1-2, pp. BIOL84. print.
Meeting Info.: 222nd National Meeting of the American Chemical Society Chicago, Illinois, USA August 26-30, 2001 American Chemical Society . ISSN: 0065-7727.
DT Conference
LA English
SL English
AB Through **screening** the **proteome** with chemical **probes** bearing functionalities common to organic synthesis but underutilized in biology, proteins or classes of proteins susceptible to new forms of inactivation may be discovered. A library of biotinylated sulfonates was synthesized and its members applied to complex **proteomes** under conditions that distinguish patterns of specific protein reactivity. Individual sulfonates exhibited unique profiles of **proteome** reactivity that in extreme cases appeared completely orthogonal to one another. Targets of the tagged sulfonate library include members of multiple structurally and mechanistically distinct enzyme families. Progress towards understanding the mechanisms by which the sulfonate **probes** react with their discrete **enzyme targets** will be reported. These data reveal that a non-directed approach towards probing the chemical reactivity of the **proteome** can readily identify compounds possessing selective and unanticipated **biological activities**.
IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology
IT Chemicals & Biochemicals
biotinylated sulfonate library; chemical **probes**; protein: reactivity patterns
IT Methods & Equipment
biotinylated sulfonate synthesis: synthetic method; **proteome screening**: **screening** method
IT Miscellaneous Descriptors
proteome; Meeting Abstract

L20 ANSWER 7 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:477440 BIOSIS
DN PREV200100477440
TI Simplified sample preparation method for protein identification by matrix-assisted laser desorption/ionization mass spectrometry: In-gel digestion on the **probe** surface.
AU Stensballe, Allan; Jensen, Ole Norregaard (1)
CS (1) Department of Biochemistry and Molecular Biology, University of Southern Denmark, Odense University, Campusvej 55, DK-5230, Odense M: jenseno@bmb.sdu.dk Denmark
SO Proteomics, (August, 2001) Vol. 1, No. 8, pp. 955-966. print.
ISSN: 1615-9853.

DT Article
LA English
SL English
AB Identification and detailed characterization of complex mixtures of proteins separated by polyacrylamide gel electrophoresis (PAGE) require optimized and robust methods for interfacing electrophoretic techniques to mass spectrometry. Peptide mapping by matrix-assisted laser desorption/ionization-time of flight mass spectrometry (MALDI-TOF-MS) is used as the first protein **screening** method in many laboratories because of its inherent simplicity, mass accuracy, sensitivity and relatively high sample through-put. We present a simplified sample preparation method for MALDI-MS that enables in-gel digestion of protein samples directly on the MALDI-MS metal **probe**. Removal of detergent and reagents as well as protein reduction and S-alkylation were performed prior to cutting of protein samples from the polyacrylamide gel slab. The general utility of this approach was demonstrated by on-**probe** digestion and MALDI-MS peptide mapping of femtomole amounts of standard proteins isolated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis. A representative of 47 human proteins obtained from a silver stained two-dimensional electrophoretic gel was analyzed by the new method and resulted in a success rate for protein identification similar to that obtained by the traditional protocols for in-gel digestion and MALDI peptide mass mapping of human proteins, i.e. approximately 60%. The overall performance of the novel on-**probe** digestion method is comparable with that of the standard in-gel sample preparation protocol while being less labour intensive and more cost-effective due to minimal consumption of reagents, enzymes and consumables. Preliminary data obtained on a MALDI quadrupole-TOF tandem mass spectrometer demonstrated the utility of the on-**probe** digestion protocol for peptide mass mapping and peptide sequencing on this instrument. Automation of the on-**probe** protein digestion procedure and its combination with automated MALDI tandem mass spectrometry should be advantageous in **proteomics** research aimed at the systematic identification and analysis of large sets of proteins from electrophoretic gels.
IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Computer Applications (Computational Biology); Equipment, Apparatus, Devices and Instrumentation; Methods and Techniques
IT Chemicals & Biochemicals
2,5-dihydroxybenzoic acid: Aldrich; SDS; acetonitrile: Fisher Scientific; alpha-cyano-4-hydroxycin-namic acid: Aldrich; bovine beta-casein: Sigma; bovine serum albumin: Sigma; ovalbumin: Sigma; protein; trypsin: Promega
IT Methods & Equipment
GPMAW 4.0 software: Light-house Data, computer software; Inspector software V2.2.12: MDS **Proteomics**, computer software; Milli-Q system: Millipore, laboratory equipment; Q-TOF hybrid instrument: Micromass, laboratory equipment; SDS-polyacrylamide gel electrophoresis: Electrophoretic Techniques, analytical method; in-gel digestion: Molecular Biology Techniques and Chemical Characterization, biochemical method; matrix-assisted laser desorption/ionization mass spectrometry: Spectrum Analysis Techniques, analytical method; matrix-assisted laser desorption/ionization mass spectrometry metal **probe**: laboratory equipment; matrix-assisted laser desorption/ionization quadrupole-time of flight mass spectrometer: MDS Sciex, laboratory equipment; matrix-assisted laser desorption/ionization-time of flight mass spectrometry: Spectrum Analysis Techniques, analytical method; nanoelectrospray needle: MDS **Proteomics**, laboratory equipment; polyacrylamide gel electrophoresis [PAGE]: Electrophoretic Techniques, gel electrophoresis, separation method; polyacrylamide gel slab: laboratory equipment; protein identification: Molecular Biology Techniques and Chemical Characterization, identification method; ready-for-use Poros

R2 nanoscale desalting column: laboratory equipment; sample preparation: Preparatory and General Laboratory Techniques, laboratory method; two-dimensional electrophoretic gel: laboratory equipment

RN 490-79-9 (2,5-DIHYDROXYBENZOIC ACID)
75-05-8 (ACETONITRILE)
28166-41-8 (ALPHA-CYANO-4-HYDROXYCIN-NAMIC ACID)
9002-07-7 (TRYPSIN)

L20 ANSWER 8 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:458877 BIOSIS
DN PREV200100458877
TI Surrogate ligands in a **proteomics**-based antibacterial program with targets of unknown biological function.
AU Christensen, J. (1)
CS (1) Karo Bio USA, Durham, NC USA
SO International Journal of Antimicrobial Agents, (June, 2001) Vol. 17, No. Supplement 1, pp. S52. print.
Meeting Info.: 22nd International Congress of Chemotherapy Amsterdam, Netherlands June 30-July 03, 2001
ISSN: 0924-8579.
DT Conference
LA English
SL English
IT Major Concepts
Molecular Genetics (Biochemistry and Molecular Biophysics); Pharmacology
IT Chemicals & Biochemicals
BioKeys: peptide **probe**; enzymes; peptide **probe**; phage display library; surrogate ligands
IT Miscellaneous Descriptors
high throughput **screening** assay development; **proteomics**-based antibacterial program; Meeting Abstract

L20 ANSWER 9 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:390263 BIOSIS
DN PREV200100390263
TI Oxidative **protein** cross-**linking** reactions involving L-tyrosine in transforming growth factor-beta1-stimulated fibroblasts.
AU Larios, Jose M.; Budhiraja, Rohit; Fanburg, Barry L.; Thannickal, Victor J. (1)
CS (1) Pulmonary and Critical Care Division, New England Medical Center, 750 Washington St., NEMC 257, Boston, MA, 02111: vthannickal@lifespan.org USA
SO Journal of Biological Chemistry, (May 18, 2001) Vol. 276, No. 20, pp. 17437-17441. print.
ISSN: 0021-9258.
DT Article
LA English
SL English
AB The mechanisms by which **ligand**-stimulated generation of reactive oxygen species in nonphagocytic cells mediate biologic effects are largely unknown. The profibrotic cytokine, transforming growth factor-beta1 (TGF-beta1), generates extracellular hydrogen peroxide (H2O2) in contrast to intracellular reactive oxygen species production by certain mitogenic growth factors in human lung fibroblasts. To determine whether tyrosine residues in fibroblast-derived extracellular matrix (ECM) **proteins** may be **targets** of H2O2-mediated dityrosine-dependent cross-**linking** reactions in response to TGF-beta1, we utilized fluorophore-labeled tyramide, a structurally related phenolic compound that forms dimers with tyrosine, as a **probe** to detect such reactions under dynamic cell culture conditions. With this approach, a distinct pattern of fluorescent labeling that seems to **target** ECM **proteins** preferentially was observed in TGF-beta1-treated cells but not in control cells. This reaction required the presence of a

heme peroxidase and was inhibited by catalase or diphenyliodonium (a flavoenzyme inhibitor), similar to the effect on TGF-beta1-induced dityrosine formation. Exogenous addition of H2O2 to control cells that do not release extracellular H2O2 produced a similar fluorescent labeling reaction. These results support the concept that, in the presence of heme peroxidases in vivo, TGF-beta1-induced H2O2 production by fibroblasts may mediate oxidative dityrosine-dependent cross-**linking** of ECM **protein**(s). This effect may be important in the pathogenesis of human fibrotic diseases characterized by overexpression/activation of TGF-beta1.

IT Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques

IT Parts, Structures, & Systems of Organisms
fibroblast

IT Chemicals & Biochemicals
L-tyrosine: Sigma; extracellular matrix **proteins**; heme peroxidase: catalyst; hydrogen peroxide; reactive oxygen species; transforming growth factor-beta-1: R&D Systems

IT Methods & Equipment
cell culture: Preparatory and General Laboratory Techniques, cell culture method

IT Miscellaneous Descriptors
molecular mechanism

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
human (Hominidae)

ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

RN 60-18-4 (L-TYROSINE)
9003-99-0 (HEME PEROXIDASE)
7722-84-1 (HYDROGEN PEROXIDE)

L20 ANSWER 10 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:329040 BIOSIS
DN PREV200100329040
TI Applications of mass spectrometry in the study of inborn errors of metabolism.
AU Clayton, P. T. (1)
CS (1) Biochemistry, Endocrinology and Metabolism Unit, Institute of Child Health, 30 Guilford Street, London, WC1N 1EH: p.clayton@ich.ucl.ac.uk UK
SO Journal of Inherited Metabolic Disease, (April, 2001) Vol. 24, No. 2, pp. 139-150. print.
ISSN: 0141-8955.
DT Article
LA English
SL English
AB During the twentieth century, and particularly in its last decade, there have been major advances in mass spectrometry (MS). As a result, MS remains one of the most powerful tools for the investigation of genetic metabolic disease. Analysis of organic acids by gas chromatography-mass spectrometry (GC-MS) and analysis of acylcarnitines by tandem mass spectrometry are still leading to the discovery of new disorders. Tandem mass spectrometry is increasingly being used for neonatal **screening**. New methods for lipid analysis have opened up the fields of inborn errors of cholesterol synthesis, of bile acid synthesis and of leukotriene synthesis. The latest developments in MS allow it to be used for determination of the amino acid sequence and posttranslational modifications of proteins. There are still some major hurdles to be overcome, but soon it should be possible to detect mutant proteins directly rather than by cDNA or genomic DNA analysis. Measurement of which proteins are overexpressed and underexpressed ('**proteomics**') should provide further information on the pathogenesis of complications of

inborn errors, e.g. hepatic cirrhosis. The use of stable isotopes in conjunction with MS allows us to **probe** metabolic pathways. As an example, evidence is presented to support the contention that vitamin E and its oxidation product are catabolized by peroxisomal beta-oxidation. Mass spectrometry also has a major role in monitoring new forms of treatment for inborn errors.

IT Major Concepts
Metabolism; Methods and Techniques

IT Diseases
inborn error of bile acid synthesis: congenital disease, metabolic disease; inborn error of cholesterol synthesis: congenital disease, metabolic disease; inborn error of leukotriene synthesis: congenital disease, metabolic disease; inborn error of metabolism: congenital disease, metabolic disease

IT Chemicals & Biochemicals
acylcarnitines; bile acid; cholesterol; leukotrienes; proteins: amino acid sequences, posttranslational modification; vitamin E

IT Methods & Equipment
gas chromatography-mass spectrometry: analytical method; mass spectrometry: analytical method, spectroscopic techniques: CB, spectroscopic techniques: CT; tandem mass spectrometry: analytical method

IT Miscellaneous Descriptors
peroxisomal-beta-oxidation

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
human (Hominidae)

ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

RN 57-88-5 (CHOLESTEROL)
1406-18-4 (VITAMIN E)

L20 ANSWER 11 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:302761 BIOSIS
DN PREV200100302761
TI Probing the surface of eukaryotic cells using combinatorial toxin libraries.
AU Bray, Mark R.; Bisland, Stuart; Perampalam, Subodini; Lim, Wai-May; Gariepy, Jean (1)
CS (1) Princess Margaret Hospital, Ontario Cancer Institute, 610 University Avenue, Rm. 7-117, Toronto, Ontario, M5G 2M9: gariepy@uhnres.utoronto.ca Canada
SO Current Biology, (1 May, 2001) Vol. 11, No. 9, pp. 697-701. print. ISSN: 0960-9822.
DT Article
LA English
SL English
AB The success of **proteomics** hinges in part on the development of approaches able to map receptors on the surface of cells. One strategy to **probe** a cell surface for the presence of internalized markers is to make use of Shiga-like toxin 1 (SLT-1), a ribosome-inactivating protein that kills eukaryotic cells. SLT-1 binds to the glycolipid globotriaosylceramide, which acts as a shuttle, allowing the toxin to be imported and routed near ribosomes. We investigated the use of SLT-1 as a structural template to create combinatorial libraries of toxin variants with altered receptor specificity. Since all SLT-1 variants retain their toxic function, this property served as a search engine enabling us to identify mutants from these libraries able to kill target cells expressing internalizable receptors. Random mutations were introduced in two discontinuous loop regions of the SLT-1 receptor binding subunit. Minimal searches from **screening** 600 bacterial colonies randomly picked from an SLT-1 library identified toxin mutants able to kill cell lines

resistant to the wild-type toxin. One such mutant toxin was shown to bind to a new receptor on these cell lines by flow cytometry. Toxin libraries provide a strategy to delineate the spectrum of receptors on eukaryotic cells.

IT Major Concepts
Biochemistry and Molecular Biophysics; Membranes (Cell Biology); Methods and Techniques
IT Parts, Structures, & Systems of Organisms
cell; cell surface
IT Chemicals & Biochemicals
Shiga-like toxin-1; receptor
IT Methods & Equipment
combinatorial toxin library: analytical method; flow cytometry: analytical method
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
CAMA-1 cell line (Hominidae); PC-3 cell line (Hominidae)
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

L20 ANSWER 12 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:174149 BIOSIS
DN PREV200100174149
TI Profiling the specific reactivity of the **proteome** with non-directed activity-based **probes**.
AU Adam, Gregory C.; Cravatt, Benjamin F.; Sorensen, Erik J. (1)
CS (1) Department of Chemistry, Skaggs Institute for Chemical Biology, Scripps Research Institute, 10550 N. Torrey Pines Rd., La Jolla, CA, 92037: cravatt@scripps.edu, sorensen@scripps.edu USA
SO Chemistry & Biology (London), (January, 2001) Vol. 8, No. 1, pp. 81-95. print.
ISSN: 1074-5521.
DT Article
LA English
SL English
AB Background: The field of **proteomics** aims to characterize dynamics in protein function on a global level. However, several classes of proteins, in particular low abundance proteins, remain difficult to characterize using standard **proteomics** technologies. Recently, chemical strategies have emerged that profile classes of proteins based on activity rather than quantity, thereby greatly facilitating the analysis of low abundance constituents of the **proteome**. Results: In order to expand the classes of proteins susceptible to analysis by activity-based methods, we have synthesized a library of biotinylated sulfonate esters and applied its members to complex **proteomes** under conditions that distinguish patterns of specific protein reactivity. Individual sulfonates exhibited unique profiles of **proteome** reactivity that in extreme cases appeared nearly orthogonal to one another. A robustly labeled protein was identified as a class I aldehyde dehydrogenase and shown to be irreversibly inhibited by members of the sulfonate library. Conclusions: Through **screening** the **proteome** with a non-directed library of chemical **probes**, diverse patterns of protein reactivity were uncovered. These **probes** labeled **protein targets** based on properties other than abundance, circumventing one of the major challenges facing contemporary **proteomics** research. Considering further that the **probes** were found to inhibit a **target enzyme**'s catalytic activity, the methods described herein should facilitate the identification of compounds possessing both selective **proteome** reactivities and novel **bioactivities**.
IT Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques

IT Chemicals & Biochemicals
aldehyde dehydrogenases: analysis; enzymes: analysis; molecular **probes**: non-directed activity-based, preparation, uses; **proteome**: analysis, specific activity profiling
IT Methods & Equipment
NMR spectroscopy: analytical method, spectroscopic techniques: CB; mass spectrometry: analytical method, spectroscopic techniques: CB
IT Miscellaneous Descriptors
biotechnology; **proteomics**: applications; **proteomics** technologies: applications
RN 9028-86-8 (ALDEHYDE DEHYDROGENASES)

L20 ANSWER 13 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:127376 BIOSIS
DN PREV200100127376
TI Cloning arbuscule-related genes from mycorrhizas.
AU Burleigh, S. (1)
CS (1) Centre for Plant Microbe Symbioses, Plant Biology and Biogeochemistry Department, Risoe National Laboratory, DK-4000, Roskilde: stephen.burleigh@risoe.dk Denmark
SO Plant and Soil, (2000) Vol. 226, No. 2, pp. 287-292. print.
ISSN: 0032-079X.
DT Article
LA English
SL English
AB Until recently little was known about the identity of the genes expressed in the arbuscules of mycorrhizas, due in part to problems associated with cloning genes from the tissues of an obligate symbiont. However, the combination of advanced molecular techniques, innovative use of the materials available and fortuitous cloning has resulted in the recent identification of a number of arbuscule-related genes. This article provides a brief summary of the genes involved in arbuscule development, function and regulation, and the techniques used to study them. Molecular techniques include differential **screening**, differential display and **screening** with heterologous **probes**, and can involve the use of mycorrhizal plant mutants. New technologies such as **proteome** analysis are also discussed.
IT Major Concepts
Molecular Genetics (Biochemistry and Molecular Biophysics); Infection
IT Parts, Structures, & Systems of Organisms
hyphae
IT Methods & Equipment
differential display: genetic method; differential **screening**: genetic method; heterologous **probe screening**: genetic method
ORGN Super Taxa
Phycomycetes: Fungi, Plantae
ORGN Organism Name
arbuscular mycorrhizal fungi (Phycomycetes)
ORGN Organism Superterms
Fungi; Microorganisms; Nonvascular Plants; Plants

L20 ANSWER 14 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:356522 BIOSIS
DN PREV200000356522
TI Developing a dynamic pharmacophore model for HIV-1 integrase.
AU Carlson, Heather A. (1); Masukawa, Kevin M.; Rubins, Kathleen; Bushman, Fredric D.; Jorgensen, William L.; Lins, Roberto D.; Briggs, James M.; McCammon, J. Andrew
CS (1) Department of Chemistry and Biochemistry, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA, 92093-0365 USA
SO Journal of Medicinal Chemistry, (June 1, 2000) Vol. 43, No. 11, pp. 2100-2114. print.

ISSN: 0022-2623.
DT Article
LA English
SL English
AB We present the first receptor-based pharmacophore model for HIV-1 integrase. The development of "dynamic" pharmacophore models is a new method that accounts for the inherent flexibility of the active site and aims to reduce the entropic penalties associated with binding a **ligand**. Furthermore, this new drug discovery method overcomes the limitation of an incomplete crystal structure of the **target protein**. A **molecular** dynamics (MD) simulation describes the flexibility of the uncomplexed **protein**. Many conformational models of the **protein** are saved from the MD simulations and used in a series of multi-unit search for interacting conformers (MUSIC) simulations. MUSIC is a multiple-copy minimization method, available in the BOSS program; it is used to determine binding regions for **probe** molecules containing **functional groups** that complement the active site. All **protein** conformations from the MD are overlaid, and conserved binding regions for the **probe** molecules are identified. Those conserved binding regions define the dynamic pharmacophore model. Here, the dynamic model is compared to known inhibitors of the integrase as well as a three-point, **ligand** -based pharmacophore model from the literature. Also, a "static" pharmacophore model was determined in the standard fashion, using a single crystal structure. Inhibitors thought to bind in the active site of HIV-1 integrase fit the dynamic model but not the static model. Finally, we have identified a set of compounds from the Available Chemicals Directory that fit the dynamic pharmacophore model, and experimental testing of the compounds has confirmed several new inhibitors.
IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Pharmaceuticals (Pharmacology)
IT Diseases
HIV infection [human immunodeficiency virus infection]: immune system disease, viral disease
IT Chemicals & Biochemicals
HIV-1 integrase [human immunodeficiency virus-1 integrase]: pharmacophore model; **protein**: **target**, uncomplexed
IT Alternate Indexing
HIV Infections (MeSH)
IT Miscellaneous Descriptors
molecular dynamics simulation
ORGN Super Taxa
Retroviridae: Animal Viruses, Viruses, Microorganisms
ORGN Organism Name
HIV-1 [human immunodeficiency virus 1] (Retroviridae)
ORGN Organism Superterms
Animal Viruses; Microorganisms; Viruses

L20 ANSWER 15 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:491189 BIOSIS
DN PREV199800491189
TI Hydrophobic residues in the C-terminal region of S100A1 are essential for **target protein** binding but not for dimerization.
AU Osterloh, Dirk; Ivanenkov, Vasily V.; Gerke, Volker (1)
CS (1) Inst. Med. Biochem., ZMBE, Univ. Muenster, D-48149 Muenster Germany
SO Cell Calcium, (Aug., 1998) Vol. 24, No. 2, pp. 137-151.
ISSN: 0143-4160.
DT Article
LA English
AB S100 **proteins** are a family of small dimeric **proteins** characterized by two EF hand type Ca2+ binding motifs which are flanked by unique N- and C-terminal regions. Although shown unequivocally in only a

few cases S100 **proteins** are thought to function by binding to, and thereby regulating, cellular **target proteins** in a Ca2+ dependent manner. To describe for one member of the family, S100A1, structural requirements underlying **target protein** binding, we generated specifically mutated S100A1 derivatives and characterized their interaction with the a subunit of the actin capping **protein** CapZ shown here to represent a direct binding partner for S100A1. Chemical cross-**linking**, **ligand** blotting and fluorescence emission spectroscopy reveal that removal of, or mutations within, the sequence encompassing residues 88-90 in the unique C-terminal region of S100A1 interfere with binding to CapZalpha and to TRTK-12, a synthetic CapZalpha peptide. The S100A1 sequence identified contains a cluster of three hydrophobic residues (Phe-88, Phe-89 and Trp-90) at least one of which - as revealed by qualitative phenyl Sepharose binding and hydrophobic fluorescent **probe** spectroscopy - is exposed on the **protein** surface of Ca2+ bound S100A1. As homologous hydrophobic residues in the closely related S100B **protein** were shown by NMR spectroscopy of Ca2+-free S100B dimers to provide intersubunit contacts (Kilby RM., van Eldik L.J., Roberts G.C.K. The solution structure of the bovine S100B dimer in the calcium-free state. Structure 1996; 4: 1041-1052; Drohat A.C., Amburgey J.C., Abildgaard F., Starich M.R., Baldissed D., Weber D.J. Solution structure of rat apo-S100B (beta beta) as determined by NMR spectroscopy. Biochemistry 1996; 35: 11577-11588), we characterized the physical state of the various S100A1 derivatives. Analytical gel filtration and chemical cross-**linking** show that dimer formation is not compromised in S100A1 mutants lacking residues 88-90 or containing specific amino acid substitutions in this sequence. Thus a cluster of hydrophobic residues in the C-terminal region of S100A1 is essential for **target protein** binding but dispensable for dimerization, a situation possibly met in other S100 **proteins** as well.

IT Major Concepts
Biochemistry and Molecular Biophysics

IT Chemicals & Biochemicals
S-100A1 **protein**: amino acid sequence, carboxyl-terminal hydrophobic residues, **target protein** binding, dimerization

L20 ANSWER 16 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:356066 BIOSIS
DN PREV199800356066
TI A new photoactivatable reagent capable of transferring a radiolabel to **target proteins**. Application to the human growth hormone-rat liver prolactin receptor interaction.
AU Masckauchan, Nestor T. H.; Delfino, Jose M. (1); Fernandez, Horacio N.
CS (1) IQUIFIB, Fac. Farm. y Bioquim., Junin 956, 1113 Buenos Aires Argentina
SO Bioconjugate Chemistry, (July-Aug., 1998) Vol. 9, No. 4, pp. 507-511. ISSN: 1043-1802.
DT Article
LA English
AB A new photoactivatable cross-**linking** reagent, 1-(2'-dithiopyridyl)-2-(5'-azidosalicylamido)ethane (ASDPE), was synthesized. This **probe** can be easily labeled with 125I in the azidosalicylamido ring and contains an activated disulfide bridge. After reaction of (125I)ASDPE with **proteins**, the radiolabeled moiety of the **probe** becomes attached to cysteine residues. Upon partial reduction of human growth hormone (hGH) with dithiothreitol, its C-terminal disulfide bond between residues 182 and 189 was cleaved and the nascent thiol groups were modified with (125I)ASDPE to yield (125I)ASET-hGH (1-(thio-hGH)-2-(3'-(125I)iodo-5'-azidosalicylamido)ethane). After binding of this hormone derivative to rat liver microsomes, followed by photolysis and subsequent reduction of disulfide bridges, the specific transfer of the radiolabeled moiety to

prolactin receptor (PRL-R) was achieved. Partial purification of the radiolabeled receptor by size exclusion chromatography was performed. We anticipate that (125I)ASDPE will be generally useful in pursuing structural and functional studies of **target proteins** which interact specifically with **protein ligands**.

IT Major Concepts
Methods and Techniques

IT Parts, Structures, & Systems of Organisms
rat liver prolactin receptor

IT Chemicals & Biochemicals
human growth hormone; 1-(2'-dithiopyridyl)-2-(5'-azidosalicylamido)ethane [ASDPE]: photoactivatable cross-**linking** reagent, synthesis

IT Methods & Equipment
protein purification; size exclusion chromatography: isolation method, purification method, liquid chromatography; NMR: imaging techniques, spectroscopic techniques: CB; 1-(2'-dithiopyridyl)-2-(5'-azidosalicylamido)ethane synthesis: Synthesis/Modification Techniques, synthetic method

IT Miscellaneous Descriptors
growth hormone-prolactin receptor interaction

RN 9002-62-4 (PROLACTIN)

L20 ANSWER 17 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:347059 BIOSIS
DN PREV199800347059
TI Human rab11a: Transcription, chromosome mapping and effect on the expression levels of host GTP-binding proteins.
AU Gromov, Pavel S. (1); Celis, Julio E.; Hansen, Claus; Tommerup, Niels; Gromova, Irina; Madsen, Peder
CS (1) Dep. Med. Biochem., Aarhus Univ., Ole Worms Alle 170, Build. 170, DK-8000 Aarhus Denmark
SO FEBS Letters, (June 16, 1998) Vol. 429, No. 3, pp. 359-364. ISSN: 0014-5793.
DT Article
LA English
AB Rab11a is a member of the rab-branch of the ras-like small GTP-binding protein superfamily that is associated with both constitutive and regulated secretory pathways. Using a direct procedure for cDNA cloning of small ras-related GTPases, that is based on the **screening** of eukaryotic cDNA expression libraries using (alpha-32P)GTP as a **probe**, we have isolated two cDNA clones encoding rab11a. Both clones share identical coding sequences, but differ in the length and sequence of their 3' untranslated regions (3'-UTR). Northern blot hybridisation analysis of various human tissues revealed indeed two mRNA species with lengths of 1.0 and 2.3 kb, respectively. Sequence analysis of the cDNAs identified two different putative polyadenylation signals (AATAAA) at positions 927 and 2302 of the larger transcript. In addition, the 3'-UTR of the larger transcript exhibited several AU-rich elements (ARE) that are believed to control gene expression by regulating the rate of mRNA degradation. Southern blots of human DNA digested with several rare restriction enzymes, and separated by pulse-field gel electrophoresis, yielded the same macro-restriction fragment pattern when hybridised with **probes** that discriminate between the two transcripts. Taken together, these findings imply that the two mRNA species originate from a single gene, which we have mapped to 15q21.3-q22.31, by the use of different polyadenylation sites. As expected, both rab11a-cDNAs yielded the same protein product when transiently expressed in COS-1 cells, and surprisingly, upregulated the **proteome** expression profile (de novo synthesis or posttranslational modification of preexisting proteins) of a few other, yet unknown GTP-binding proteins.

IT Major Concepts

Molecular Genetics (Biochemistry and Molecular Biophysics)
IT Chemicals & Biochemicals
complementary DNA; messenger RNA; rabl1a: transcription; GTP-binding protein: expression; GTPase: small ras-related
IT Sequence Data
AF000231: DDBJ, EMBL, GenBank, nucleotide sequence
IT Methods & Equipment
chromosome mapping: genetic method
IT Miscellaneous Descriptors
gene expression; sequence alignment
ORGN Super Taxa
Cercopithecidae: Primates, Mammalia, Vertebrata, Chordata, Animalia; Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
human (Hominidae); COS-1 (Cercopithecidae)
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Nonhuman Mammals; Nonhuman Primates; Nonhuman Vertebrates; Primates; Vertebrates
RN 9059-32-9 (GTPASE)

L20 ANSWER 18 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1986:420323 BIOSIS
DN BA82:95857
TI DRUG TARGETING TO THE LIVER WITH LACTOSYLATED ALBUMINS DOES THE GLYCOPROTEIN TARGET THE DRUG OR IS THE DRUG TARGETING THE GLYCOPROTEIN.
AU VAN DER SLUIJS P; BOOTSMA H P; POSTEMA B; MOOLENAAR F; MEIJER D K F
CS DEP. PHARM. THER., DRUG DESIGN AND DEV. PROGRAM, UNIV. OF GRONINGEN, ANT. DEUSINGLAAN 2, NL-9713 AW GRONINGEN, THE NETHERLANDS.
SO HEPATOLOGY (BALTIMORE), (1986) 6 (4), 723-728.
CODEN: HPTLD9. ISSN: 0270-9139.
FS BA; OLD
LA English
AB The isolated perfused rat liver preparation was employed to study hepatic disposition of the model drug-carrier **conjugate** fluorescein-lactosylated albumin (F-LnHSA) with special reference to the influence of the organic anion fluorescein on liver cell specificity of the endocytosed neoglycoprotein. Hepatic clearance of fluoresceinated neoglycoproteins was significantly faster than clearance of radioiodinated neoglycoproteins. Perfusate clearance of F-L7HSA and F-L25HSA could not completely be inhibited by a dose of 10 mg asialoorosomucoid that saturates the hepatocyte receptor-mediated endocytic process. From these data, we inferred an additional hepatic uptake mechanism, competing with the Ashwell-receptor-mediated internalization of galactose-terminated glycoproteins. Clearance experiments with fluoresceinated 125I-human serum albumin in the presence of the polyanionic **probe** dextran sulfate revealed a nearly complete (.apprx. 90%) inhibition of hepatic uptake, while also a pronounced effect was obtained with colloidal carbon. These data point to nonparenchymal cell uptake of fluoresceinated **protein** via interaction with scavenger receptors. In wash-out studies, it was shown that about 25% of **ligand** sequestrated by sinusoidal liver cells escaped degradation and recycled to the perfusion medium. Our results show that care should be taken in the use of neoglycoproteins as drug carriers to hepatocytes, since a load of only 2 to 3 moles fluorescein per mole neoglycoprotein considerably affects intrahepatic distribution. The relative contribution of nonparenchymal cell uptake by coupling of acidic drugs to the neoglycoproteins is very probably inversely related to the number of exposing galactose groups per **molecule** neoglycoprotein. This phenomenon of "inversed **targeting**" could therapeutically both be useful or detrimental, dependent on the spectrum of cell types that should be reached by the drug.
IT Miscellaneous Descriptors
RAT FLUORESCEIN-LACTOSYLATED ALBUMIN **CONJUGATE** PHARMACEUTICAL

ADJUNCT-DRUG GASTROINTESTINAL-DRUG DRUG CARRIER RADIO IODINE HEPATIC CLEARANCE ASIALOOROSOMUCOID INHIBITION RECEPTOR-MEDIATED INTERNALIZATION INTRAHEPATIC DRUG DISTRIBUTION ACIDIC DRUG COUPLING INVERSED TARGETING PHARMACOKINETICS PHARMACODYNAMICS

RN 7553-56-2 (IODINE)

L20 ANSWER 19 OF 19 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1985:377445 BIOSIS
DN BA80:47437
TI MORPHOLOGICAL ANALYSIS OF **LIGAND** UPTAKE AND PROCESSING THE ROLE OF MULTIVESICULAR ENDOSOMES AND COMPARTMENT OF UNCOUPLING OF RECEPTOR AND **LIGAND** IN RECEPTOR-**LIGAND** PROCESSING.
AU HARDING C; LEVY M A; STAHL P
CS DEP. PHYSIOLOGY AND BIOPHYSICS, WASHINGTON UNIV. SCH. MED., 660 SOUTH EUCLID AVE., ST. LOUIS, MO 63110, USA.
SO EUR J CELL BIOL, (1985) 36 (2), 230-238.
CODEN: EJCBDN. ISSN: 0171-9335.
FS BA; OLD
LA English
AB The receptor-mediated endocytosis and intracellular processing of transferrin and mannose receptor **ligands** were investigated in bone marrow-derived macrophages, fibroblasts and reticulocytes. Mannosylated bovine serum albumin (BSA) **conjugated** to colloidal Au (Au-man-BSA) or colloidal Au-transferrin (AuTf) were used to trace **ligand** processing in these cells. These **ligands** appeared to be processed by mechanisms similar to those observed previously with other mannose receptor and galactose receptor **ligand probes**. After uptake via coated pits and coated vesicles, Au-man-BSA appeared in small uncoated vesicles and tubular structures and was transferred to large, sometimes multivesicular endosomes (MVEs), which sometimes had arm-like protrusions reminiscent of CURL (compartment of uncoupling of receptor and **ligand**). Initially these structures became increasingly multivesicular, but during longer incubations the inclusion vesicles appeared to disintegrate to leave a denser, amorphous lumen. Inclusion vesicle disintegeration may result from the introduction of lysosomal **enzymes** into these structures. These results suggest a model for differential receptor-**ligand** and **ligand-ligand** sorting. As suggested membrane constituents may be recycled to the plasma membrane from the arms of CURL. Receptor-bound **ligands**, such as transferrin, would also recycle. The luminal contents, including dissociated **ligands**, other soluble **proteins** and inclusion vesicles (containing some membrane **proteins**), would **target** to lysosomes. This would result in the lysosomal degradation of any membrane **proteins** that were incorporated in the inclusion vesicle membranes.
IT Miscellaneous Descriptors
BOVINE SERUM ALBUMIN BONE MARROW DERIVED MACROPHAGE FIBROBLAST RETICULOCYTE SOLUBLE **PROTEIN** INCLUSION VESICLES LYSOSOMAL DEGRADATION **ENZYMES**

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FILE 'WPIDS' ENTERED AT 12:37:22 ON 18 MAR 2002
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     FILE 'WPIDS' ENTERED AT 12:30:54 ON 18 MAR 2002
L1           104 S PROTEOM?
L2         70043 S PROBE?
L3        195974 S SCREEN?
L4         24325 S BIOACTIV? OR BIO? (3A) ACTIV?
L5         18626 S LIGAND#
L6         19136 S FUNCTIONAL (3A) (GR## OR GROUP#)
L7          3785 S TARGET? (5A) (PROTEIN# OR MOL## OR MOLECUL? OR ENZYM?)
L8            27 S L1 AND L2
L9            21 S L8 AND (L3 OR L4 OR L5 OR L6 OR L7)
L10        93156 S PROTEIN#
L11        62726 S ENZYM?
L12           17 S L9 AND (L10 OR L11)
L13       139982 S L10 OR L11
L14         7739 S L13 AND L2
L15           68 S L6 AND L14
L16           68 S L15 AND (L2 OR L3)
L17           15 S L15 AND (L3 OR L4)
L18           23 S L15 AND L5
L19           12 S L18 AND CONJUGAT?
L20           38 S L19 OR L17 OR L12
L21           17 S L20 AND L2 AND L5
L22           38 S L20 AND L2
L23           23 S L22 AND L6
L24           15 S L21 AND L23
L25           25 S L21 OR L23
L26           15 S L7 AND L20
L27           30 S L26 OR L25

     FILE 'WPIDS' ENTERED AT 12:37:22 ON 18 MAR 2002

=> d .wp 1-30

L27  ANSWER 1 OF 30  WPIDS COPYRIGHT 2002   DERWENT INFORMATION LTD
AN   2002-097640 [13]   WPIDS
DNC  C2002-030429
TI   Novel human neurotransmitter transporter polypeptides and polynucleotides
     for diagnosing, preventing or treating transport, neurological and
     psychiatric disorders and for identifying modulators of therapeutic use.
```

DC B04 D16
IN BAUGHN, M R; DING, L; ELLIOTT, V S; GANDHI, A R; HAFALIA, A; LAL, P; PATTERSON, C; RANKUMAR, J; SANJANWALA, M S; TRIBOULEY, C M; WALIA, N K; YAO, M G; YUE, H
PA (INCY-N) INCYTE GENOMICS INC
CYC 95
PI WO 2001090148 A2 20011129 (200213)* EN 123p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
ADT WO 2001090148 A2 WO 2001-US16283 20010517
PRAI US 2000-228448P 20000727; US 2000-205518P 20000519; US 2000-213956P 20000622; US 2000-215105P 20000628; US 2000-218947P 20000714
AB WO 200190148 A UPAB: 20020226
NOVELTY - An isolated human neurotransmitter transporter polypeptide (I), (NTT) 1-6, comprising a sequence (S1) of 602, 730, 523, 649, 625 or 592 amino acids defined in the specification, a naturally occurring polypeptide comprising an amino acid sequence 90% identical to (S1), a **biologically active** or immunogenic fragment of (S1), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) encoding (I) and comprising a sequence (S2) of 2168, 2709, 2958, 2135, 1997 or 2774 base pairs (bp) defined in the specification, a naturally occurring polynucleotide comprising a polynucleotide sequence 90% identical to (S2), a polynucleotide complementary to (II) or an RNA equivalent of (II);

(2) a recombinant polynucleotide (III) comprising a promoter sequence operably linked to (II);

(3) a cell transformed with (III);

(4) a transgenic organism comprising (III);

(5) method of producing (I);

(6) an isolated antibody (IV) which specifically binds to (I);

(7) an isolated polynucleotide comprising at least 60 contiguous nucleotides of (II);

(8) detecting (M1) a target polynucleotide having the sequence of (II) in a sample, by:

(a) hybridizing the sample with a **probe** comprising 20 contiguous nucleotides comprising a sequence complementary to the target polynucleotide in the sample, where the **probe** specifically hybridizes to the target polynucleotide under conditions where a hybridization complex is formed between the **probe** and the target polynucleotide or its fragments, or by amplifying the target polynucleotide or its fragment by PCR; and

(b) detecting the presence or absence of the hybridization complex or the amplified product, and, optionally, if present the amount of the complex or the amplified product;

(9) an antibody (monoclonal) produced by using (I); and

(10) a composition comprising (I), an agonist or antagonist compound identified using (I), (IV) or the above antibody.

ACTIVITY - Antidiabetic; Antiparkinsonian; Antianginal; Neuroprotective; Nootropic; Antidepressant; Anticonvulsant; Neuroleptic; Antianemic; Ophthalmological; Antithyroid; Cerebroprotective; Tranquilizer; Vasotropic; Cytostatic; Antiarrhythmic; Dermatological; Antilipemic; Muscular-Gen; Antimicrobial; Cardiant; Antisickling; Antiinfertility; Endocrine-Gen.

MECHANISM OF ACTION - Gene therapy; neurotransmitter transporter polypeptide modulator. No supporting data is given.

USE - (I) is useful for **screening** a compound for effectiveness as an agonist or antagonist of (I), by exposing a sample

comprising (I) to a compound and detecting agonist or antagonist activity in the sample. (I), the identified agonist and antagonist are useful for treating a disease or condition associated with decreased or overexpression of functional NTT in a patient. (I) is useful for **screening** for a compound that modulates the activity of the polypeptide or that binds to the polypeptide. (I) is further useful as an immunogen for preparing polyclonal or monoclonal antibody by hybridoma technology. (II) is useful for **screening** a compound for effectiveness in altering expression of a target polynucleotide comprising the sequence of (II). A **probe** comprising at least 20 contiguous nucleotides of (II) is useful for assessing toxicity of a test compound, by treating a biological sample containing nucleic acids with the test compound, hybridizing the **probe** with nucleic acids of the treated biological sample to form a complex, quantifying the amount of hybridization complex and comparing the complex in the treated biological sample with the amount of complex in an untreated biological sample, where a difference in the amount of complex in the treated biological sample is indicative of toxicity of the test compound. (IV) is useful for detecting the presence of (I) and purifying (I) from a sample. (IV), optionally labeled is useful for diagnosing a condition or disease associated with expression of NTT in a subject or in a biological sample (all claimed). (I) and (II) and modulators of (I) are useful for diagnosis, treatment and prevention of transport, neurological and psychiatric disorders. Transport disorders include akinesia, amyotrophic lateral sclerosis, ataxia telangiectasia, cystic fibrosis, Becker's muscular dystrophy, diabetes mellitus, diabetes insipidus, myasthenia gravis, myocarditis, Parkinson's disease, prostate cancer; cardiac disorders associated with transport include angina, bradyarrhythmia, dermatomyositis, polymyositis, neurological disorders associated with transport include Alzheimer's disease, amnesia, bipolar disorder, dementia, depression, epilepsy, Tourette's disorder, schizophrenia, and other disorders associated with transport include neurofibromatosis, sickle cell anemia, Wilson's disease, cataracts, infertility, hyperglycemia, hypoglycemia, Graves' disease, goiter, Cushing's disease, hypercholesterolemia and cystinuria. Neurological disorders treatable include epilepsy, stroke, Huntington's disease, dementia, and other extrapyramidal disorder, motor neuron disorders, prion disease including kuru, metabolic disease of the nervous system, and other developmental disorders of the central nervous system, neuromuscular disorders, metabolic, endocrine and toxic myopathies, periodic paralysis, mental disorders including mood and anxiety. Psychiatric disorders include acute stress disorder, alcohol dependence, anorexia nervosa, anxiety, obsessive-compulsive disorder, panic disorder and sleep disorder. (II) is useful for creating knock in humanized animals or transgenic animals to model human disease and to detect and quantify gene expression in biopsied tissues in which expression of NTT is correlated with disease. (II) is also useful for generating hybridization **probes** useful in mapping the naturally occurring genomic sequence and oligonucleotide primers derived from (II) are useful to detect single nucleotide polymorphisms. NTT, fragments of it and antibodies specific for NTT are useful as elements on a microarray which is useful to monitor or measure **protein-protein** interactions, drug-**target** interactions and gene expression profiles. Sequences of (I) are used to analyze the **proteome** of a tissue or cell type.
Dwg.0/0

L27 ANSWER 2 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2002-097342 [13] WPIDS
CR 2002-010942 [68]
DNN N2002-071955 DNC C2002-030233
TI Composition useful for e.g. analyzing biological fluid comprises at least one covalent product of a **target protein** member and at least one activity based **probe** member of combinatorial chemical library.

DC A96 B04 D16 S03 T01
IN ADAM, G; CRAVATT, B F; LOVATO, M; PATRICELLI, M; SORENSEN, E
PA (SCRI) SCRIPPS RES INST
CYC 94
PI WO 2001077684 A2 20011018 (200213)* EN 119p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001027280 A 20011023 (200213)
ADT WO 2001077684 A2 WO 2000-US34187 20001215; AU 2001027280 A AU 2001-27280 20001215
FDT AU 2001027280 A Based on WO 200177684
PRAI US 2000-222532P 20000802; US 2000-195954P 20000410; US 2000-212891P 20000620
AB WO 200177684 A UPAB: 20020226
NOVELTY - A composition comprising at least one covalent product of a **target protein** member of a complex **protein** composition and at least one activity based **probe** member of combinatorial chemical library, is new.

DETAILED DESCRIPTION - A composition comprising at least one covalent product of a **target protein** member or an **enzyme** of a complex **protein** composition and at least one activity based **probe** member of combinatorial chemical library comprising several members of formula (I) (the members of the library have different on rates with the **protein** members):

R(F-L)-X (I)

X = a **ligand** present prior to formation of the product or added to a reactive functionality to provide the **ligand** having the same chemical structure for each of the members of the library;

L = a bond or linking group, which is the same in each of the members of the library;

F = a **functional group** reactive at an active site of a **protein** member and comprising the same reactive functionality in each of the members of the library;

R = a group of less than 1k Dal that is different in each of the members of the library.

R is a part of F or L.

INDEPENDENT CLAIMS are also included for the following:

(A) a combinatorial chemical library comprising a number of (I);

(B) **screening** for members having affinity for an active **protein** in a complex mixture of **proteins** from a biological source, involves:

(a) combining with the complex mixture, in an active or inactive form, the combinatorial chemical library with active **proteins** to form a **conjugate**;

(b) isolating **conjugates** from the active and inactive complex mixture; and

(c) comparing the **conjugates** formed (the **conjugates** in the active mixture absent in the inactive complex mixture are comprised only of active **proteins** reactive with the members of the combinatorial library);

(C) **screening** a combinatorial library for members having affinity for a **protein** member affecting a cellular phenotype in a complex mixture of **proteins** from a natural source involves:

(a) combining a first truncated combinatorial chemical comprising (I) with a first cell type comprising a wild-type **proteome** to react the **functional group** with active **proteins** to form a **conjugate**;

(b) determining a change in phenotype of the first cell type;

(c) combining the combinatorial chemical library having the

ligand with a lysate from the first cell type;

(d) isolating **conjugates** from the wild-type **proteome**; and

(e) characterizing the **protein** in the **conjugate** (the truncated members of the first combinatorial library lack the **ligand**);

(D) a method for identifying a group which has specific affinity for an active site of an **enzyme** involves:

(a) contacting a combinatorial chemical library comprising (I) with a sample containing the **enzyme** to produce an **enzyme conjugate**;

(b) isolating the **enzyme conjugate**; and

(c) degrading the **enzyme conjugate** (the R group that directs the member to the active site is indicative of the R group having an affinity for the active site);

(E) a method of identifying activity-based **probes** having specific affinities for members of a **protein** genus having a common active site involves:

(a) combining candidate activity-based **probes** with at least one active member of the **protein** genus under conditions to form a **conjugate**;

(b) combining candidate activity-based **probes** with the member, inactivated by other than covalent bonding, under the same conditions as with the active member;

(c) isolating any **conjugates** formed with the active member and the inactive member by means of the **ligand** binding to the receptor;

(d) determining the amount of **conjugate** formed with the inactive member and rejecting the candidate activity-based **probes** if the amount of **conjugate** exceeds a predetermined level; and

(e) identifying said probe for an ABP candidate that is not rejected (the activity based probe comprise a functionality specific for the protein genus, a ligand for binding to a bound receptor, a linker and an affinity group and the activity based probe comprises a family of linkers);

(F) a system for identifying activity-based probes for target protein members of a proteome from a combinatorial library of candidate activity-based probes comprising (I), at least one group of related target proteins and a programmed-data processor for receiving and transmitting values (The programmed-data processor comprises a program for evaluating results from the combining of the combinatorial library and the target proteins based on the formation of conjugates of the activity-based probes and the target proteins to determine the affinity of each of the activity-based probes for each of the target proteins. For providing a profile of the affinity of each of the activity-based probes for the target proteins of interests a method is employed which involves combining under binding conditions the activity-based probes and the target proteins such that the activity-based probes binds to the target proteins in relation to the affinity of the activity-based probes to the target proteins. Determining the amount of conjugate of each activity-based probes for each target protein as the results for the data processor, feeding the results to the data processor, and transmitting the values for the binding of each of the activity-based probes to identify activity-based probes forming conjugates); and

(G) a system for identifying activity-based probes from a combinatorial library of candidate compounds comprises a programmed data processor for receiving and transmitting data comprising a program for analyzing the amount of each conjugate and/or the relative abundance of each conjugate and determining the on rates of the probes with the target proteins.

USE - The composition is used for:

(i) analyzing biological fluid, cell fraction or a cell lysate;

(ii) for screening at least one desired biological activity or target

protein;
(iii) screening molecules having affinity for active proteins in a complex mixture of proteins from a biological source;
(iv) for identifying activity-based probes. (all claimed).
ADVANTAGE - The combinatorial library allows for designing drugs for binding to the active site of a target protein. The method easily identifies the biological target molecule for lead compounds, all with varying ability to block cell division. The method shows whether the multiple lead compounds interact with the same or different biological target molecules. The method is simple, takes less time and is economical.
Dwg.0/23

L27 ANSWER 3 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2002-010942 [01] WPIDS
CR 2002-097342 [68]
DNN N2002-009086 DNC C2002-002761
TI **Screening** for **bioactivity** of candidate compound towards **target proteins** in mixture, useful for generating large number of drug molecules, comprises combining **probe** with mixture and sequestering **proteins conjugated** to **probe**.
DC B04 D16 S03 T01
IN ADAM, G; CRAVATT, B F; LOVATO, M; PATRICELLI, M; SORENSEN, E
PA (SCRI) SCRIPPS RES INST
CYC 94
PI WO 2001077668 A2 20011018 (200201)* EN 118p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001024349 A 20011023 (200213)
ADT WO 2001077668 A2 WO 2000-US34167 20001215; AU 2001024349 A AU 2001-24349 20001215
FDT AU 2001024349 A Based on WO 200177668
PRAI US 2000-222532P 20000802; US 2000-195954P 20000410; US 2000-212891P 20000620
AB WO 200177668 A UPAB: 20020226
NOVELTY - **Screening** for the **bioactivity** of candidate compound toward a group of related **target proteins** in **proteomic** mixture of **proteins** from cell comprising:
(a) combining a **probe** with an untreated portion and a portion inactivated with a non-covalent agent;
(b) sequestering **proteins conjugated** with the **probe**;
(c) determining the **proteins** that are sequestered; and
(d) comparing amount of the **proteins** sequestered, is new.
DETAILED DESCRIPTION - **Screening** (M1) for the **bioactivity** of a candidate compound toward a group of related **target proteins** in a **proteomic** mixture of **proteins** from a cell, by employing at least one **probe** comprising:
(a) combining at least one **probe** with an untreated portion and with a portion inactivated with a non-covalent agent, of the mixture under conditions for reaction with the **target proteins**;
(b) sequestering **proteins conjugated** with the **probe** from each of the mixtures;
(c) determining the **proteins** that are sequestered; and
(d) comparing the amount of each of the **proteins** sequestered from the untreated portion and the inactivated portion as indicative of the **bioactivity** of the candidate compound with the

target proteins. The **probe** comprises a reactive functionality group specific for the group of **target proteins** and a **ligand**.

INDEPENDENT CLAIMS are also included for the following:

(1) **screening** for the **bioactivity** of a candidate compound toward a group of related **target enzymes** in a **proteomic** mixture of **proteins** from a cell employing at least one **probe** of formula R asterisk (F-L)-X (I) comprising M1;

(2) determining in a **proteomic** mixture (A) the presence of active target members (B) comprising a group of related **proteins** involving:

(a) combining (A) in wild-type form with a **probe**;

(b) combining (A) after non-specific deactivation with the **probe**; and

(c) determining the presence of (B) **conjugated** with the **probe** in (A) in active and inactive form, where the **probe** comprises a reactive functionality specific for the active site when active, under conditions for **conjugation** of the **probe** to (B) and when the **probe conjugated** to (B) in (A) in active form and in less amount in inactive form, the presence of (B) is determined;

(3) determining in a plurality of **proteomic** mixtures the presence of active target members of a group of related **proteins** which have a common functionality for **conjugation** at an active site comprising:

(a) combining the mixtures in wild type form with a **probe** containing a reactive functionality specific for the active site;

(b) determining the presence of target members **conjugated** with the **probe**; and

(c) analyzing for the presence of target members **conjugated** with the **probe** using simultaneous individual capillary electrokinetic analysis or capillary high performance liquid chromatography (HPLC), where when the target members are **conjugated** to target members, the presence of active target members is determined;

(4) determining in a **proteomic** mixture the presence of active target members of a group of related **enzymes** which have common functionality for **conjugation** at an active site comprising:

(a) combining the mixture in wild type form with a **probe** containing a reactive functionality specific for the active site;

(b) combining the mixture after non-specific deactivation with the **probe**;

(c) determining the presence of target members **conjugated** with the **probe** in the **proteomic** mixtures in active and inactive form, where the **probe** is **conjugated** to at least one target member in the mixture in active form and in lesser amount in inactive form, the presence of active members is determined;

(5) a system for identifying active **target proteins** in a related group of **proteins** in a sample, using at least one activity-based **probe** (ABP) binding to several members of the **proteins** comprising:

(a) a sample containing at least one of the **target protein**;

(b) ABP of formula R asterisk (Q-L)-X (II); and

(c) a programmed data processor for receiving and transmitting values comprising a program for evaluating results from the combining of ABP and sample resulting in formation of **conjugates** with active **target proteins** present to determine the presence of active **target proteins** and providing a profile of the binding;

(6) a system for determining the status of a biological system in relation to the presence of members of at least one related group of

active **proteins**, by employing the results from combining (I) and a sample suspected of containing at least one **target protein**, to produce **conjugates** of (I) with the **target proteins** in varying amounts in relation to the amount of each of the active **target proteins**.

X = a ligand for binding to a reciprocal receptor or a chemically reactive functionality for reacting with a reciprocal functionality for adding a ligand;

L = a linking group, which is the same in each of the members of a library;

Q = a functional group reactive at an active site of a target protein, and is the same reactive functionality in each of the members of the library (preferably a sulfonyl group, fluorophosphonyl or fluorophosphoryl group); and

R asterisk = H or a moiety of less than 1 kDa providing specific affinity for the target protein;

asterisk = intends that R is a part of F or L.

F = functional group reactive at an active site of a target enzyme and is the same reactive functionality in each of the members of the library.

USE - For screening for the bioactivity of a candidate compound towards a group of related target proteins; e.g. for determining the status of a biological system in relation to the presence of the active protein; such as an infectious disease, a response to a therapeutic agent or a response to a candidate drug (claimed). The method is also useful for rapidly generating and developing large numbers of drug candidate molecules or for randomly generating a large number of drug candidates and later optimizing those candidates that show the most medicinal promise; for systemically synthesizing a large number of molecules that may vary greatly in their chemical structure or composition or that may vary in minor aspects of their chemical structure or composition. The screened compounds can be used to indicate the presence of a particular disease in a human or animal, the compounds can stimulate or inhibit the activity of bacteria, viruses, fungi or other infectious agent and/or modulate the effect of a disease by preventing or decreasing the severity of disease or curing a disease such as cancer, diabetes, atherosclerosis, high blood pressure, Parkinson's disease and other disease states.

ADVANTAGE - The method easily identifies the biological target molecule for lead compounds, all with varying ability to block cell division. The method shows whether the multiple lead compounds interact with the same or different biological target molecules. The method is simple, takes less time and is economical.

Dwg.0/24

L27 ANSWER 4 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-582081 [65] WPIDS
CR 2001-502868 [55]; 2001-557937 [62]; 2001-570624 [57]; 2001-570626 [57]; 2001-570652 [64]
DNN N2001-433652 DNC C2001-172587
TI Preparation for diagnosing or treating bipolar affected disorder (BAD) or unipolar depression, or for **screening** for modulators, comprises a BAD-associated **protein** isoform.
DC B04 D16 S03
IN HERATH, H M A C; PAREKH, R B; ROHLFF, C
PA (OXFO-N) OXFORD GLYCOSCIENCES UK LTD
CYC 94
PI WO 2001063294 A2 20010830 (200165)* EN 163p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001033957 A 20010903 (200202)
ADT WO 2001063294 A2 WO 2001-GB791 20010223; AU 2001033957 A AU 2001-33957 20010223
FDT AU 2001033957 A Based on WO 200163294
PRAI US 2000-254830P 20001212; GB 2000-4412 20000224; GB 2000-30050 20001208
AB WO 200163294 A UPAB: 20020109
NOVELTY - A preparation comprising an isolated Bipolar Affected Disorder (BAD)-Associated **Protein** Isoform (DPIs) which is one of DPI-2-15, 17-25, 29, 30, 34, 35, 37-39, 44, 45, 47, 49-52, 57-60, 65-67, 69, 71-73, 76, 78, 79, 87-90, 92, 93, 96, 103-111, 113, 115, 116, 119-121, 123, 124, 127-129, 135, 139-147, 151, 152, 154, 155, 159-179, 181, or 184-281, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an antibody to one of the DPI's;

(2) **screening**, diagnosis or prognosis of BAD or unipolar depression, for determining the stage or severity of BAD or unipolar depression, identifying a subject at risk of developing BAD or unipolar depression, or monitoring the effect of therapy comprising:

(a) analyzing a test sample of body fluid by two dimensional electrophoresis to generate a two-dimensional array of features where the relative abundance of a chosen feature correlates with the presence, absence, stage or severity of BAD or unipolar depression or predicts the onset or course of BAD or unipolar depression, and comparing the abundance of the chosen feature in the test sample with the abundance in body fluid from persons free from BAD or unipolar depression, or with the abundance of an Expression Reference Feature (ERF) in the test sample; or

(b) detecting one of the DPI's in a sample of cerebrospinal fluid from the subject;

(3) kits comprising one of the new preparations, several distinct preparations, an antibody of a preparation or several distinct antibodies of the preparations;

(4) pharmaceutical compositions comprising the antibody of (1), or a fragment or derivative of (1) containing the binding domain;

(5) treating or preventing BAD or unipolar depression comprising administering a nucleic acid encoding one of the DPI's or that inhibits the function of one of the DPI's;

(6) **screening** for agents that interact with a DPI, a DPI fragment, or a related polypeptide, comprising contacting the DPI, a **biologically active** portion of a DPI, or a related polypeptide with a candidate agent and determining interaction;

(7) **screening** for agents that modulate the expression or activity of a DPI or a DPI-related polypeptide comprising:

(a) contacting a population of cells expressing a DPI or related polypeptide with a candidate agent;

(b) contacting a second population of cells expressing the DPI or related polypeptide with a control agent; and

(c) comparing the level of the DPI or related polypeptide, mRNA encoding them, or the level of induction of a cellular second messenger;

(8) **screening** for or identifying agents that modulate the expression or activity of a DPI or related polypeptide comprising:

(a) administering a candidate agent to a mammal or group of mammals;

(b) administering a control agent to a second mammal or group of mammals; and

(c) comparing the level of expression of the DPI or related polypeptide or of mRNA encoding them in the two groups, or comparing the level of induction of a cellular second messenger in the two groups;

(9) **screening** for or identifying agents that interact with a DPI or related polypeptide comprising contacting a candidate agent with the DPI or related polypeptide and detecting binding;

(10) **screening** for or identifying agents that modulate the activity of a DPI or related polypeptide comprising, in a first aliquot,

contacting a candidate agent with the DPI or related polypeptide and comparing the activity of the DPI or related polypeptide in the first aliquot after addition of the candidate agent with the activity of the DPI or related polypeptide in a control aliquot, or with a previously determined reference range;

(11) **screening**, diagnosis or prognosis of BAD or unipolar depression or monitoring the effect of an anti-BAD or anti-unipolar depression drug or therapy comprising:

(a) contacting an oligonucleotide **probe** comprising 10 or more consecutive nucleotides complementary to a nucleotide sequence encoding one of the DPI's;

(b) detecting hybridization between the **probe** and the sequence; and

(c) comparing the hybridization with the hybridization in a control sample, or with a previously determined reference range;

(12) **screening** for agents effective for the treatment of BAD or unipolar depression comprising:

(a) contacting Dkk (dickkopf) with a population of cells expressing the Wnt receptor and **ligand** in the presence of a candidate agent;

(b) contacting Dkk with a second population of cells expressing the receptor and **ligand** in the presence of a control agent;

(c) comparing the binding of the Dkk to the populations of cells, the level of induction of GSK-3 phosphorylation or beta-catenin accumulation in the populations of cells, or the level of a Dkk mediated activity in the cells; and

(d) testing for the ability of agents able to modulate the activity of Dkk to decrease clinical features of BAD in a BAD disease model system; and

(13) screening for agents that modulate the binding of Dkk to a binding partner comprising:

(a) contacting Dkk with the Dkk binding partner in the presence of a candidate or control agent; and

(b) comparing the binding of the Dkk to the binding partner.

ACTIVITY - Antidepressant; antimanic; nootropic; tranquilizer; neuroleptic. No biological data is given.

MECHANISM OF ACTION - Gene therapy.

USE - The DPI's are used to screen, diagnose or prognose of BAD or unipolar depression, determine the stage or severity of BAD or unipolar depression, identify a subject at risk of developing BAD or unipolar depression, or monitor the effect of therapy in a subject. They are also used to screen for or identify agents that interact with a DPI. These agents, antibodies against the DPIs, and nucleic acids encoding the DPIs are used to treat or prevent BAD or unipolar depression (all claimed). Diseases that can be treated are attention deficient disorder, a schizoaffective disorder, a bipolar or a unipolar affective disorder. The DPIs are used in proteomics.

ADVANTAGE - The proteomic approach of using DPIs for screening, diagnosis or prognosis of BAD or unipolar depression overcomes the problems of using gene expression analysis, such as not being able to obtain central nervous system (CNS) tissue from a living patient under normal circumstances.

Dwg.0/3

L27 ANSWER 5 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-476115 [51] WPIDS
DNC C2001-142814
TI New lipid metabolism **enzymes** and the polynucleotides encoding them, useful in diagnosing, treating, and preventing cancer, neurological, autoimmune, inflammatory, gastrointestinal or cardiovascular disorders.
DC B04 C06 D16
IN AZIMZAI, Y; BAUGHN, M R; GANDHI, A R; HILLMAN, J L; LU, D A M; NGUYEN, D B; TANG, Y T; WALIA, N K; YUE, H

PA (INCY-N) INCYTE GENOMICS INC
CYC 94
PI WO 2001053468 A2 20010726 (200151)* EN 120p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001031053 A 20010731 (200171)
ADT WO 2001053468 A2 WO 2001-US2060 20010118; AU 2001031053 A AU 2001-31053 20010118
FDT AU 2001031053 A Based on WO 200153468
PRAI US 2000-183683P 20000217; US 2000-177732P 20000121; US 2000-178885P 20000128; US 2000-181863P 20000211
AB WO 200153468 A UPAB: 20010910
NOVELTY - A new isolated polypeptide comprises an amino acid sequence comprising:

(a) 338, 370, 282, 736, 789, 393, 421, 152, 682 or 330 amino acids fully defined in the specification;

(b) a naturally occurring amino acid sequence having at least 90% sequence identity to (a);

(c) a **biologically active** fragment of (a); and

(d) an immunogenic fragment of (a).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide comprising:

(a) an isolated polynucleotide encoding the polypeptide;

(b) a recombinant polynucleotide having a promoter sequence operably linked to (1a);

(c) a polynucleotide sequence having 2195, 3395, 1560, 2860, 3544, 2776, 3176, 459, 2756 or 1672 bp fully defined in the specification;

(d) a naturally occurring polynucleotide sequence having at least 90% sequence identity to (c);

(e) a polynucleotide sequence complementary to (c) or (d);

(f) an RNA equivalent of (c)-(e); or

(g) at least 60 contiguous nucleotides of (c), (d), (e) or (f);

(2) a cell transformed with the recombinant polynucleotide;

(3) a transgenic organism comprising the recombinant polynucleotide;

(4) a method for producing the polypeptide;

(5) an isolated antibody, which specifically binds to the polypeptide;

(6) methods for detecting a target polynucleotide in a sample;

(7) a method (M1) for **screening** a compound for effectiveness as an agonist of the polypeptide comprising:

(a) exposing a sample comprising the polypeptide to a compound; and

(b) detecting agonist activity in the sample;

(8) a method (M2) for **screening** a compound for effectiveness as an antagonist of the polypeptide comprising:

(a) exposing the sample comprising the polypeptide to a compound; and

(b) detecting antagonist activity in the sample;

(9) compositions comprising:

(a) the polypeptide and a pharmaceutical excipient;

(b) agonist compound identified by the method and a pharmaceutical excipient; or

(c) antagonist compound identified by the method and a pharmaceutical excipient;

(10) methods (M3) for treating a disease or condition associated with decreased expression of functional lipid metabolism **enzymes** (LME) comprising administering to a patient the composition of (9a) or (9b);

(11) a method (M4) for treating a disease or condition associated with overexpression of functional LME comprising administering to the

patient the composition of (c);

(12) a method (M5) of screening for a compound that specifically binds to the polypeptide comprising:

(a) combining the polypeptide with at least one test compound; and

(b) detecting binding of the polypeptide to the test compound, thus identifying a compound that specifically binds to the polypeptide;

(13) a method (M6) of screening for a compound that modulates the activity of the polypeptide comprising:

(a) combining the polypeptide with at least one test compound under conditions permissive for the activity of the polypeptide;

(b) assessing the activity of the polypeptide in the presence of the test compound; and

(c) comparing the activity of the polypeptide in the presence of the test compound with the activity of the polypeptide in the absence of the test compound, where a change in the activity of the polypeptide in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide;

(14) a method (M7) for screening a compound for effectiveness in altering expression of a target polynucleotide, where the target polynucleotide comprises the sequence cited above, comprising:

(a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide;

(b) detecting altered expression of the target polynucleotide; and

(c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound; and

(15) a method (M8) for assessing toxicity of a test compound comprising:

(a) treating a biological sample containing nucleic acids with the test compound;

(b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of the polynucleotide, where a specific hybridization complex is formed between the probe and a target polynucleotide in the biological sample, the target polynucleotide comprising the polynucleotide sequence cited above or its fragment;

(c) quantifying the amount of hybridization complex; and

(d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, where a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

ACTIVITY - Cytostatic; immunosuppressive; anti-inflammatory; cardiovascular; cerebroprotective; neuroprotective; antibacterial; fungicide; virucide; antiparasitic.

No details of clinical tests given.

MECHANISM OF ACTION - Gene therapy.

USE - The proteins and nucleic acids encoding the enzymes are useful in diagnosing, treating, and preventing cancer, neurological, autoimmune, inflammatory, gastrointestinal, and cardiovascular disorders, and in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of lipid metabolism enzymes (LME). LME may also be used to treat or prevent a disorder associated with decreased expression or activity of LME, such as tumors or cancers (e.g. adenocarcinoma, leukemia, lymphoma), motor neuron disorders, multiple scleroses and other demyelinating diseases, developmental disorders of the central nervous system, bacterial, viral, fungal and parasitic diseases. LME may further be used to screen for compounds that specifically bind to or modulate the activity of LME, and to produce antibodies. Polynucleotides encoding LME are useful for somatic and germline gene therapy, to detect and quantify gene expression in biopsied tissues in which expression of LME may be correlated with disease, to detect the

presence of associated disorders, to analyze the proteome of a tissue or cell type, to generate hybridization probes, and to screen libraries of compounds in various drug screening techniques. Antibodies which specifically bind LME may be used for the diagnosis or disorders characterized by expression of LME, in assays to monitor patients being treated with LME or its antagonists, agonists or inhibitors, or to detect the presence of any peptide which shares one or more antigenic determinants with LME.

Dwg.0/0

L27 ANSWER 6 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-451868 [48] WPIDS
CR 2001-061976 [07]; 2001-656926 [66]
DNC C2001-136537
TI Detecting a nucleic acid useful in e.g. diagnosing genetic, bacterial or viral diseases, by contacting the nucleic acid with oligonucleotides attached to nanoparticles and having sequences complementary a portion of the nucleic acid.
DC B04 D16
IN ELGHANIAN, R; LETSINGER, R L; LI, Z; MIRKIN, C A; MUCIC, R C; STORHOFF, J J; TATON, T A
PA (NANO-N) NANOSPHERE INC
CYC 93
PI WO 2001051665 A2 20010719 (200148)* EN 229p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001032795 A 20010724 (200166)
ADT WO 2001051665 A2 WO 2001-US1190 20010112; AU 2001032795 A AU 2001-32795 20010112
FDT AU 2001032795 A Based on WO 200151665
PRAI US 2001-760500 20010112; US 2000-176409P 20000113; US 2000-200161P 20000426; US 2000-603830 20000626
AB WO 200151665 A UPAB: 20011227
NOVELTY - Detecting a nucleic acid having at least 2 portions, comprises contacting the nucleic acid with one or more types of nanoparticles having oligonucleotides attached to the nanoparticles and having sequences complementary to portions of the sequence of the nucleic acid.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) methods of detecting a nucleic acid having at least 2 portions comprising:

(a) contacting the nucleic acid with one or more types of nanoparticles having oligonucleotides attached to the nanoparticles and having sequences complementary to portions of the sequence of the nucleic acid, under conditions allowing the hybridization of the oligonucleotides on the nanoparticles with the nucleic acid; and

(b) observing a detectable change brought about by hybridization of the oligonucleotides on the nanoparticles with the nucleic acid;

(2) kits comprising at least one container holding a composition containing at least 2 types of nanoparticles having oligonucleotides attached to it, where the first type has a sequence complementary to the sequence of a first portion of a nucleic acid, and the oligonucleotides on the second type of nanoparticles has a sequence complementary to the sequence of a second portion of the nucleic acid;

(3) an aggregate **probe** comprising at least 2 types of nanoparticles having oligonucleotides attached to it, the nanoparticles of the aggregate **probe** are bound to each other as a result of the hybridization of some of the oligonucleotides attached to them, and at least one of the nanoparticles of the aggregate **probe** having

oligonucleotides attached to it which have a hydrophobic group on the end not attached to the nanoparticles;

(4) a kit comprising a container holding a core **probe** having at least 2 types of nanoparticles having oligonucleotides attached to it and the nanoparticles of the core **probe** is bound to each other as a result of the hybridization of some of the oligonucleotides attached to them;

(5) a core **probe** comprising at least 2 types of nanoparticles having oligonucleotides attached to it;

(6) a substrate having nanoparticles attached to it;

(7) a metallic or semiconductor nanoparticle having oligonucleotides attached to it which are labeled with fluorescent molecule at the end not attached to the nanoparticle;

(8) a satellite **probe** comprising a particle having attached oligonucleotides, and **probe** oligonucleotides hybridized to the oligonucleotides attached to the nanoparticles;

(9) methods of nanofabrication;

(10) nanomaterials or nanostructures composed of nanoparticles having oligonucleotides attached to it and being held by oligonucleotide connectors;

(11) a composition comprising at least 2 types of nanoparticles having oligonucleotides attached to it;

(12) an assembly of containers holding nanoparticles having oligonucleotides attached to them;

(13) a nanoparticle having multiple oligonucleotides attached to it;

(14) a method of separating a selected nucleic acid having at least 2 portions from other nucleic acid;

(15) methods of binding oligonucleotides to charged nanoparticles to produce stable nanoparticle-oligonucleotide conjugates;

(16) nanoparticle-oligonucleotide conjugates which are nanoparticles having oligonucleotides attached to them, where the oligonucleotides are present on the surface of the nanoparticles at a surface density sufficient so that the conjugates are stable, and at least some of the oligonucleotides have sequences complementary to at least one portion of the nucleic acid or oligonucleotide sequence;

(17) nanoparticles having oligonucleotides attached to them which comprises at least one type of recognition oligonucleotides having a sequence complementary to a portion of the nucleic acid sequence, and a type of diluent oligonucleotides; and

(18) methods of detecting a nucleic acid.

USE - The methods are useful for detecting nucleic acids, natural or synthetic, and modified or unmodified. The methods may also be applied in the diagnosis of genetic, bacterial and viral diseases, in forensics, in DNA sequencing, for paternity testing, for cell line authentication, and for monitoring gene therapy. The methods are further useful in research and analytical laboratories in DNA sequencing, in the field to detect the presence of specific pathogens, for quick identification of an infection to assist in drug prescription, and in homes and health centers for inexpensive first-line **screening**.

ADVANTAGE - The methods, which are based on observing color change with the naked eye, are cheap, fast, simple, robust (reagents are stable), do not require specialized or expensive equipment, and little or no instrumentation is required.

Dwg.0/46

L27 ANSWER 7 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-441281 [47] WPIDS
DNN N2001-326466 DNC C2001-133212
TI Composite nanospheres, useful as carriers for diagnostic or therapeutic agents, comprise fluid core containing inorganic nanoparticles and shell of hydrophilic polymer.
DC A13 A14 A82 A96 A97 B04 B07 D16 E19 G02 J04 P41 S03
IN BIBETTE, J; BOSC, E; ELAISSARI, A; MANDRAND, B; MONDAIN, M O; PICHOT, C

PA (INMR) BIO MERIEUX; (CNRS) CNRS CENT NAT RECH SCI; (CNRS) CENT NAT RECH SCI; (MOND-I) MONDAIN-MONVAL O
CYC 94
PI WO 2001033223 A1 20010510 (200147)* FR 28p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
FR 2800635 A1 20010511 (200147)
AU 2001012882 A 20010514 (200149)
ADT WO 2001033223 A1 WO 2000-FR3085 20001106; FR 2800635 A1 FR 1999-14194 19991105; AU 2001012882 A AU 2001-12882 20001106
FDT AU 2001012882 A Based on WO 200133223
PRAI FR 1999-14194 19991105
AB WO 200133223 A UPAB: 20010822
NOVELTY - Composite nanospheres (A):
(i) have diameter 50-1000, best 100-200, nm, plus or minus 5%;
(ii) have a liquid core of organic phase containing inorganic nanoparticles (NP) distributed in it; and
(iii) has an envelope comprising at least one hydrophilic polymer (B) prepared from a water-soluble monomer, especially an N-alkyl or N,N-dialkyl acrylamide.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) **conjugate** (C1) of (A), having reactive **functional groups** on the surface, linked to at least one **ligand**, i.e. antibody (or fragment), **protein**, polypeptide, **enzyme**, polynucleotide, **probe**, primer, nucleic acid fragment and biotin;
(2) reagent (R) containing (A) or C1;
(3) diagnostic composition containing (R);
(4) **conjugate** (C2) of (A) coupled to at least one **ligand**, i.e. a pharmaceutical compound, antisense **probe**, gene repair agent, therapeutic gene or agent that blocks/inhibits **protein** activity;
(5) therapeutic or prophylactic composition containing C2;
(6) **conjugate** (C3) of (A) coupled to at least one **ligand**, i.e. a cage molecule, chelating agent or catalyst.
USE - (A) are used as carriers for a wide variety of active compounds (**ligands**), e.g. for use in diagnostic, therapeutic, prophylactic or cosmetic materials, also in paints, inks, plastics or as catalysts. Typical applications are as carriers of nucleic acid or **proteins**; as reagents in immunological or nucleic acid binding tests (for detecting or quantifying antigens, antibodies or other **proteins**), and in gene therapy.
ADVANTAGE - The use of a liquid core allows separation of the particles even in a weak magnetic field.
Dwg.0/0

L27 ANSWER 8 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-425161 [45] WPIDS
DNN N2001-315437 DNC C2001-128597
TI Composite particles, useful as carriers for diagnostic or therapeutic agents, comprise matrix of hydrophobic polymer, containing stabilized and dispersed inorganic nanoparticles.
DC A13 A14 A96 A97 B04 B07 D16 E19 J04 P41 S03
IN BIBETTE, J; BOSC, E; ELAISSARI, A; MANDRAND, B; MONDAIN, M O; PICHOT, C; MONDAIN-MONVAL, O
PA (INMR) BIO MERIEUX; (CNRS) CNRS CENT NAT RECH SCI; (CNRS) CENT NAT RECH SCI; (PICH-I) PICHOT C
CYC 94

PI WO 2001033224 A1 20010510 (200145)* FR 33p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
FR 2800636 A1 20010511 (200145)
AU 2001012883 A 20010514 (200149)
ADT WO 2001033224 A1 WO 2000-FR3086 20001106; FR 2800636 A1 FR 1999-14195 19991105; AU 2001012883 A AU 2001-12883 20001106
FDT AU 2001012883 A Based on WO 200133224
PRAI FR 1999-14195 19991105
AB WO 200133224 A UPAB: 20010813
NOVELTY - Composite particle (CP) has diameter 50-1000 nm, (preferably 100-250 nm) and consists of:
(i) a matrix of hydrophobic polymer; and
(ii) inorganic nanoparticles, stabilized and dispersed, reactively homogeneously, within the matrix.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) preparing CP;
(2) **conjugate** (C1) of CP, having reactive **functional groups** on the surface, linked to at least one **ligand**, such as antibody (or fragment), **protein**, polypeptide, **enzyme**, polynucleotide, **probe**, primer, nucleic acid fragment and biotin;
(3) reagent (R) containing at least one C1;
(4) diagnostic composition containing (R);
(5) **conjugate** (C2) of CP coupled to at least one **ligand**, such as a pharmaceutical compound, antisense **probe**, gene repair agent, therapeutic gene or agent that blocks/inhibits **protein** activity; and
(6) **conjugate** (C3), having reactive **functional groups** on its surface, coupled to at least one **ligand**, including a cage molecule, chelating agent or catalyst.
USE - CP are used as carriers for a wide variety of active compounds (**ligands**), such as for use in diagnostic, therapeutic or prophylactic materials, also as catalysts. Typical applications are as carriers of nucleic acid or **proteins**; as reagents in immunological or nucleic acid binding tests (for detecting or quantifying antigens, antibodies or other **proteins**), and in gene therapy.
ADVANTAGE - Compared with conventional magnetic particles, CP have greater specific surface area and are less subject to sedimentation.
Dwg.0/0

L27 ANSWER 9 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-418080 [44] WPIDS
DNN N2001-309733 DNC C2001-126433
TI Novel human protease **proteins** (PRTS) useful for diagnosing, treating, preventing gastrointestinal, cardiovascular, autoimmune/inflammatory, cell proliferative disorders associated with abnormal expression of PRTS.
DC B04 D16 P14 S03
IN AU-YOUNG, J; BAUGHN, M R; BURFORD, N; LAL, P; LU, D A M; NGUYEN, D B; REDDY, R; TANG, Y T; YANG, J; YAO, M G; YUE, H
PA (INCY-N) INCYTE GENOMICS INC
CYC 94
PI WO 2001046443 A2 20010628 (200144)* EN 129p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC

LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001022857 A 20010703 (200164)
ADT WO 2001046443 A2 WO 2000-US34811 20001219; AU 2001022857 A AU 2001-22857 20001219
FDT AU 2001022857 A Based on WO 200146443
PRAI US 2000-179903P 20000202; US 1999-172055P 19991223; US 2000-177334P 20000121; US 2000-178884P 20000128
AB WO 200146443 A UPAB: 20010809
NOVELTY - Isolated human protease **proteins** (I) (referred as PRTS 1-14) having fully defined sequence (PS) of 1055, 358, 467, 187, 289, 960, 525, 795, 919, 209, 77, 414, 397 or 145 (S1-S14) amino acids as given in specification, a naturally occurring amino acid sequence having 90% sequence identity to PS, or **biologically active** or immunogenic fragment of PS, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) encoding (I);

(2) a recombinant polynucleotide (III) comprising a promoter sequence operably linked to (II);

(3) a cell (IV) transformed with (III);

(4) a transgenic organism comprising (III);

(5) preparation of (I);

(6) an isolated antibody that specifically binds to (I);

(7) an isolated polynucleotide (N1) comprising a sequence selected from:

(a) a polynucleotide sequence selected from a fully defined sequence of 4028, 1422, 1911, 854, 1386, 3323, 2123, 2893, 4170, 767, 1538, 1497, 1194 (S15-S27) or 438 (S28) nucleotides as given in the specification;

(b) a naturally occurring polynucleotide sequence having at least 90% sequence identity to a polynucleotide selected from S15-S28;

(c) a polynucleotide sequence complementary to the sequence of (a) or (b);

(d) an RNA equivalent of (a) to (c);

(8) an isolated polynucleotide comprising 60 contiguous nucleotides of N1;

(9) detecting a target polynucleotide in a sample which comprises a sequence of N1 involves:

(a) hybridizing the sample with a **probe** comprising at least 20 contiguous nucleotides which is complementary to the target polynucleotide in the sample and which specifically hybridizes to the target polynucleotide, under conditions, by which a hybridization complex is formed between the **probe** and the target polynucleotide or its fragments, and then detecting the presence or absence of the hybridization complex, and, optionally, if present the amount of the target polynucleotide is also quantitated; or

(b) amplifying the target polynucleotide or its fragments by polymerase chain reaction (PCR) and then detecting the presence or absence of the amplified target polynucleotide or its fragment optionally, if present the amount of the target polynucleotide is also quantitated;

(10) **screening** a compound for effectiveness as an agonist or antagonist of (I) involves exposing a sample comprising (I) to a compound and detecting agonist or antagonist activity in the sample;

(11) **screening** for a compound that specifically binds to (I) involves combining (I) with a test compound under suitable conditions and then detecting binding of (I) to the test compound, thus identifying a compound that specifically binds to (I);

(12) **screening** for a compound that modulates the activity of (I) involves combining (I) with a test compound under conditions permissive for the activity of (I), assessing the activity of (I) in the presence of the test compound and then comparing the activity of (I) in the presence of test compound with the activity of (I) in the absence of the test compound, where a change in the activity of (I) in the presence

of the test compound is indicative of a compound that modulates the activity of (I);

(13) **screening** a compound for effectiveness in altering expression of a target polynucleotide which comprises a sequence of (S15)-(S27) or (S28) involves exposing the sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide and comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound; and

(14) a method for assessing toxicity of a test compound, comprising:

(a) treating a biological sample containing nucleic acids with the test compound;

(b) hybridizing the nucleic acids of the sample with a **probe** comprising at least 20 contiguous nucleotides of N1 under conditions where a specific hybridization complex is formed between the **probe** and target polynucleotide, where the target polynucleotide comprises a sequence of N1 or its fragment;

(c) quantifying the amount of hybridization complex;

(d) comparing the amount of complex in the treated sample with the amount of complex in an untreated sample, where a difference in the amounts is indicative of toxicity of the test compound.

ACTIVITY - Antiinflammatory; cytostatic; antiatherosclerotic; hypotensive; antitumor; cardiant; anti-HIV; immunosuppressive; dermatological; neuroprotective; antiviral; nootropic; antibacterial; antiinfertility. No supporting biological data is given.

MECHANISM OF ACTION - PRTS expression or activity modulators; gene therapy.

No supporting biological data is given.

USE - The pharmaceutical compositions comprising (I) or an agonist of (I) is useful for treating a disease or condition associated with decreased expression of functional PRTS. The pharmaceutical composition comprising the antagonist of (I) is useful for treating a disease or condition associated with overexpression of (I). (I) is useful for identifying compounds that bind to (I) or which modulate activity of (I).

(I) and (II) are useful for diagnosing, treating or preventing a gastrointestinal disorder such as anorexia, cardiovascular disorder such as atherosclerosis and hypertension, autoimmune/inflammatory disorders such as acquired immuno deficiency syndrome (AIDS), cell proliferative disorders such as actinic keratosis, a developmental disorders such as epilepsy, an epithelial disorders such as allergic contact dermatitis, neurological disorders such as Alzheimer's disease, and reproductive disorders such as infertility.

(II) is useful for creating knock out or knock in humanized animals or transgenic animals to model human disease. (II) is useful for somatic or germline gene therapy for treating the above mentioned disorders. (II) is also useful for developing genetic linkage maps, detecting differences in chromosomal location due to translocation, inversion etc.

(I), its catalytic or immunogenic fragments are useful for screening libraries of compounds in several drug screening assays. (I) is useful for analyzing the proteome of a tissue or cell type.

Antibodies which bind to (I) may be used for diagnosis of disorders characterized by expression of (I) or in assays to monitor patients being treated with PRTS or agonists, antagonists or inhibitors of PRTS. The antibodies specific for PRTS, or PRTS or its fragments may be used as elements on a microarray which is useful to monitor protein-protein interaction, drug-target interaction, etc. The antibodies are also useful for assessing toxicity of a test compound. The method involves treating biological sample containing protein with the test compound and incubating with antibodies specific to the PRTS polypeptides.

Dwg.0/0

L27 ANSWER 10 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-390243 [41] WPIDS

DNC C2001-118895
TI Novel human lyase **proteins** (HLYAP) useful for diagnosing, treating and preventing neurological, reproductive, cell proliferative and inflammatory disorders associated with abnormal expression of HLYAP.
DC B04 D16
IN BANDMAN, O; BAUGHN, M R; HILLMAN, J L; LU, D A M; TANG, Y T; YUE, H
PA (INCY-N) INCYTE GENOMICS INC
CYC 94
PI WO 2001044445 A2 20010621 (200141)* EN 102p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001024309 A 20010625 (200162)
ADT WO 2001044445 A2 WO 2000-US33815 20001213; AU 2001024309 A AU 2001-24309 20001213
FDT AU 2001024309 A Based on WO 200144445
PRAI US 1999-172307P 19991216
AB WO 200144445 A UPAB: 20010724
NOVELTY - Isolated human lyase **proteins** (I) (referred as HLYAP 1-10) having defined sequence (PS) of 243, 425, 216, 343, 74, 176, 374, 780, 594 or 298 amino acids given in specification, a naturally occurring amino acid sequence having 90% sequence identity to PS, or **biologically active** or immunogenic fragment of PS, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) isolated polynucleotide (II) encoding (I). (II) comprises a defined sequence of 1686, 2053, 2490, 1230, 955, 849, 1919, 2735, 2822 (S11-S19) or 1774 (S20) nucleotides given in the specification, is a naturally occurring polynucleotide sequence having 90% identity to the above mentioned polynucleotide sequences, a polynucleotide sequence which is complementary to the above mentioned sequences, or is a RNA equivalent of the above mentioned sequences;

(2) recombinant polynucleotide (III) comprising a promoter sequence operably linked to (II);

(3) cell (IV) transformed with (III);

(4) transgenic organism comprising (III);

(5) preparation of (I);

(6) isolated antibody that specifically binds to (I);

(7) detecting a target polynucleotide in a sample which comprises a sequence of (II) comprising hybridizing the sample with a **probe** containing at least 20 contiguous nucleotides which is complementary to the target polynucleotide in the sample and which specifically hybridizes to the target polynucleotide, under conditions, by which a hybridization complex is formed between the **probe** and the target polynucleotide or its fragments, and then detecting the presence or absence of the hybridization complex, and, optionally, if present the amount of the target polynucleotide is also quantitated. Alternately, the method is carried out by amplifying the target polynucleotide or its fragments by polymerase chain reaction (PCR) and then detecting the presence or absence of the target polynucleotide or its fragment;

(8) isolated polynucleotide comprising 60 contiguous nucleotides of (II);

(9) **screening** a compound for effectiveness as an agonist or antagonist of (I) comprising exposing a sample containing (I) to a compound and detecting agonist or antagonist activity in the sample;

(10) **screening** for a compound that specifically binds to (I) comprising combining (I) with a test compound under suitable conditions and then detecting binding of (I) to the test compound, thus identifying a compound that specifically binds to (I);

(11) **screening** for a compound that modulates the activity of (I) comprising combining (I) with a test compound under conditions permissive for the activity of (I), assessing the activity of (I) in the presence of the test compound and then comparing the activity of (I) in the presence of test compound with the activity of (I) in the absence of the test compound. A change in the activity of (I) in the presence of the test compound is indicative of a compound that modulates the activity of (I); and

(12) **screening** a compound for effectiveness in altering expression of a target polynucleotide which comprises a sequence of (S11)-(S19) or (S20) comprising exposing the sample containing the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide and comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

ACTIVITY - Antiarteriosclerotic; antiatherosclerotic; antiinflammatory; antipsoriatic; cytostatic; hepatotrophic; immunosuppressive; antiinfertility; gynecological; osteopathic; anticonvulsant; cerebroprotective; nootropic; neuroprotective; antiparkinsonian; tranquilizer; neuroleptic; anti-HIV; dermatological; antiallergic; antianemic; antiasthmatic; nephrotophic; antigout; antiarthritic; antirheumatic; antiulcer; ophthalmological. No supporting data is given.

MECHANISM OF ACTION - Gene therapy.

USE - (I) is useful for identifying compounds that bind to (I) or which modulate activity of (I). (II) is useful for assessing toxicity of a test compound.

(I) and (II) are useful for diagnosing, treating or preventing cell proliferative disorders such as actinic keratosis, arteriosclerosis, atherosclerosis, bursitis, cirrhosis, hepatitis, psoriasis, mixed connective tissue disease (MCTD), myelofibrosis, a cancer such as adenocarcinoma, leukemia, lymphoma or melanoma; reproductive disorders such as infertility, ovulatory defects, disruption of the estrous cycle, disruptions of the menstrual cycle, endometrial and ovarian tumors, ectopic pregnancies and teratogenesis; neurological disorders such as epilepsy, stroke, Alzheimer's disease, Huntington's disease, Parkinson's disease, bacterial and viral meningitis, brain abscess, Creutzfeldt-Jakob disease, cerebral palsy, autonomic nervous system disorders, cranial nerve disorders, spinal cord diseases, muscular dystrophy and other neuromuscular disorders, peripheral nervous system disorders, anxiety, amnesia, and schizophrenic disorders; inflammatory disorders such as acquired immunodeficiency syndrome (AIDS), Addison's disease, adult respiratory distress syndrome, allergies, amyloidosis, anemia, asthma, autoimmune hemolytic anemia, autoimmune thyroiditis, autoimmune polyendocrinopathy and Crohn's disease, atopic dermatitis, Goodpasture's syndrome, gout, multiple sclerosis, osteoarthritis, osteoporosis, psoriasis, rheumatoid arthritis or ulcerative colitis and uveitis.

(II) is useful to detect upstream sequences such as promoters and regulatory elements. (II) is useful for creating knock out or knock in humanized animals or transgenic animals to model human disease. (II) is useful for somatic or germline gene therapy for treating the above disorders. Oligonucleotide primers derived from (II) may be used to detect single nucleotide polymorphisms. (II) may be used for generating hybridization **probes** useful in mapping the naturally occurring genomic sequences. (II) is useful for developing genetic linkage maps, detecting differences in chromosomal location due to translocation or inversion. Oligonucleotides or longer fragments derived from any of the polynucleotide sequences may be used as elements on a microarray. (I), its catalytic or immunogenic fragments are useful for **screening** libraries of compounds in several drug **screening** assays. (I) is useful for analyzing the **proteome** of a tissue or cell type. A vector encoding (I) or its fragments is useful for treating the above mentioned disorders. Antibodies which bind to (I) may be used for

diagnosis of disorders characterized by expression of (I) or in assays to monitor patients being treated with HLYAP or agonists, antagonists or inhibitors of HLYAP. The antibodies specific for HLYAP may be used as elements on a microarray which is useful to monitor **protein** interaction and drug-**target** interaction. The antibodies are also useful for assessing toxicity of a test compound.
Dwg.0/0

L27 ANSWER 11 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-380124 [40] WPIDS
DNC C2001-116357
TI New biotinylated electrically conductive copolymers useful for producing biosensors or biochips bearing arrays of **probes**.
DC A23 A89 B04 D16
IN COSNIER, S
PA (BIOP-N) BIOPIXEL LTD
CYC 1
PI US 6197881 B1 20010306 (200140)* 22p
ADT US 6197881 B1 US 1999-376692 19990818
PRAI US 1999-376692 19990818
AB US 6197881 B UPAB: 20010719
NOVELTY - Biotinylated electrically conductive copolymers (I) are new.
DETAILED DESCRIPTION - Electrically conductive copolymers of formula (I) are new:
A, B' = monomer units;
w', y = 0 or more;
x, z = 1 or more;
L1, L2 = covalent linkers or spacer arms;
L3 = a **functional group**; and
Bt = covalently bonded biotin, optionally complexed with avidin, streptavidin or their derivatives.
An INDEPENDENT CLAIM is also included for the production of (I) by electrochemical or chemical copolymerization of A-L1-(L2-Bt)z with B-(L3)w' on a support.
USE - Biosensors or biochips can be produced by forming a layer of (I) on a support, e.g. a metal electrode, by electrochemical or chemical polymerization, reacting the biotin groups with avidin, optionally forming multiple layers by sequential biotin-avidin coupling, and reacting the outermost biotin or avidin groups with avidin or biotin **conjugates** of **ligands** that can function as **probes**, especially **proteins**, peptides, polypeptides, lectins, antibodies, receptors, **enzymes**, single-domain antibodies, monoclonal catalytic antibodies, immunoadhesins, sugars, oligosaccharides, DNA, cDNA or RNA sequences, oligonucleotides, peptide nucleic acids, lipids, phospholipids, fluorescent **probes**, spin labels, metal complexes, polymers or monomers.
Dwg.0/12

L27 ANSWER 12 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-258140 [26] WPIDS
DNC C2001-077861
TI Replicable genetic packages displaying compounds or including nucleic acid tags that serve to record a characteristic of a compound, useful for **screening** large libraries of compounds to identify compounds with a desired activity.
DC B04 D16
IN BARRETT, R W; CWIRLA, S E; DOWER, W J; GALLOP, M; WOIWODE, T F
PA (BARR-I) BARRETT R W; (DOWE-I) DOWER W J; (GALL-I) GALLOP M; (XENO-N) XENOPORT INC
CYC 94
PI WO 2001023619 A1 20010405 (200126)* EN 130p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000078397 A 20010430 (200142)

ADT WO 2001023619 A1 WO 2000-US26849 20000929; AU 2000078397 A AU 2000-78397 20000929

FDT AU 2000078397 A Based on WO 200123619

PRAI US 1999-156675P 19990929

AB WO 200123619 A UPAB: 20010515

NOVELTY - Replicable genetic packages that display various compounds are new. The replicable genetic packages include compounds attached to it, or nucleic acid tags that may serve to record a characteristic of the compound.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also provided for the following:

(1) a replicable genetic package (R1) displaying a compound other than an expressed polypeptide, where the replicable genetic package comprises a heterologous nucleic acid tag encoding a characteristic of the compound;

(2) a replicable genetic package (R2) displaying a compound other than an expressed polypeptide, where the replicable genetic package and the compound are attached via a linker;

(3) a replicable genetic package (R3) displaying a compound, where the replicable genetic package comprises a heterologous nucleic acid tag encoding a characteristic of the compound by a code other than the standard genetic code;

(4) a method (M1) of **screening** a library of compounds, comprising providing replicable genetic packages displaying different compounds, where the compounds are other than an expressed polypeptide; and assaying the replicable genetic packages to identify at least one replicable genetic package displaying at least one compound with a desired property;

(5) a method (M2) of **screening** a library of compounds, comprising:

(a) providing different replicable genetic packages each displaying a compound other than an expressed polypeptide, and harboring different heterologous nucleic acid tags;

(b) assaying the replicable genetic packages to identify at least one replicable genetic package displaying at least one compound with a desired property; and

(c) decoding the heterologous nucleic acid tag of at least one replicable genetic package to identify a characteristic of the compound with the desirable property; and

(6) another method of **screening** a library of compounds, comprising:

(a) for each compound to be **screened**, contacting the compound with a replicable genetic package to form replicable genetic packages displaying different compounds, where different replicable genetic packages harbor different heterologous nucleic acid tags; and

(b) decoding the heterologous nucleic acid tag of at least one replicable genetic package to identify a characteristic of at least one compound with the desirable property.

USE - The replicable genetic packages can be used to rapidly **screen** large libraries of compounds to identify compounds having a desired activity, for e.g. they can be used to identify library members capable of:

(a) binding to a receptor;

(b) being transported into or through a cell;

(c) functioning as a substrate or inhibitor of an **enzyme**;

(d) killing bacteria, fungi or other microorganisms;

(e) triggering signal transduction; and

(f) agonizing or antagonizing a receptor.

ADVANTAGE - The use of compound-bearing replicable genetic packages allows for ease of quantification and high sensitivity in a variety of different types of assays.
Dwg.0/22

L27 ANSWER 13 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-244811 [25] WPIDS
DNN N2001-174296 DNC C2001-073482
TI Novel human **protein** phosphatase and kinase **proteins** for diagnosis, treatment and prevention of gastrointestinal, immune system, neurological and cell proliferative disorders.
DC B04 D16 P14 S03
IN AZIMZAI, Y; BANDMAN, O; BAUGHN, M R; HILLMAN, J L; LU, D A M; TANG, Y T; YUE, H
PA (INCY-N) INCYTE GENOMICS INC
CYC 94
PI WO 2001020004 A2 20010322 (200125)* EN 103p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000078297 A 20010417 (200140)
ADT WO 2001020004 A2 WO 2000-US25515 20000914; AU 2000078297 A AU 2000-78297 20000914
FDT AU 2000078297 A Based on WO 200120004
PRAI US 1999-154141P 19990915
AB WO 200120004 A UPAB: 20011129
NOVELTY - An isolated human **protein** phosphatase and kinase **proteins** (PPHKP) (I) comprising a 329, 141, 447, 666, 358, 470, 150, 253, 442, 659 or 145 residue amino acid sequence (S1), fully defined in the specification, a naturally occurrence sequence having at least 90 % identity to S1, and **biologically active** and immunogenic fragments of S1, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) encoding (I);

(2) a recombinant polynucleotide (III) comprising a promoter sequence operably linked to (II);

(3) a cell (IV) transformed with (III);

(4) a transgenic organism (V) comprising (III);

(5) production of (I), comprising culturing (IV) under expression conditions, and recovering the polypeptide;

(6) an isolated antibody (VI) which specifically binds to (I);

(7) an isolated polynucleotide (VII) comprising a 1884, 784, 1657, 2118, 2116, 2897, 839, 1081, 2924, 2781 or 754 base pair sequence (S2), fully defined in the specification, a naturally occurrence sequence having at least 90 % identity to (S2), its complement, or an RNA equivalent;

(8) an isolated polynucleotide (VIII) comprising at least 60 contiguous nucleotides of (VII);

(9) detecting (M1) a target polynucleotide having a sequence of (VII) in a sample, comprising:

(a) hybridizing the sample with a **probe** comprising at least 20 contiguous nucleotides of a sequence complementary to the target polynucleotide in the sample, the **probe** specifically hybridizes to the target polynucleotide under hybridizing conditions, and detecting the presence or absence of the hybridization complex, and, optionally, if present, the amount; or

(b) amplifying the target polynucleotide or its fragment using polymerase chain reaction amplification, and detecting the presence or absence of the amplified target polynucleotide or its fragment, and optionally, if present, the amount;

(10) **screening** (M2) a compound for effectiveness as an agonist or antagonist of (I) or for effectiveness in altering the expression of a target nucleotide having a sequence of (II), comprising:

(a) exposing a sample comprising (I) or the target nucleotide to the compound;

(b) detecting agonist or antagonist activity in the sample or the altered expression of the target nucleotide; and

(c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound;

(11) **screening** (M3) for a compound that specifically binds to (I) or modulates the activity of (I), comprising:

(a) combining (I) with at least one test compound and detecting binding of (I) to the test compound, identifying a compound that specifically binds to (I), or

(b) assessing the activity of (I) in the test sample, and comparing the activity of (I) in the presence and absence of the test compound, a change in the activity of (I) in the presence of the test compound indicates a compound that modulates the activity of (I);

(12) a composition (IX) comprising (I), or an agonist or antagonist of (I) identified by M2; and

(13) assessing (M4) toxicity of a test compound, comprising:

(a) treating a biological sample containing nucleic acids with the test compound;

(b) hybridizing the nucleic acids of the treated biological sample with a **probe** comprising at least 20 contiguous nucleotides of (VII) under hybridizing conditions, the target polynucleotide comprising a polynucleotide sequence of (VII) or its fragment;

(c) quantifying the amount of hybridization complex; and

(d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, a difference indicates the toxicity of the test compound.

ACTIVITY - Antiinflammatory; antidiarrheic; laxative; antiemetic; hepatotropic; anti-HIV (human immunodeficiency virus); antianemic; antiasthamatic; antiarteriosclerotic; antithyroid; immunosuppressive; antidiabetic; nephrotropic; antigout; thyromimetic; neuroprotective; osteopathic; uropathic; ophthalmological; antiarthritic; antirheumatic; dermatological; cytostatic; antibacterial; antifungal; protozoacide; tranquilizer; vulnerary; anticonvulsant; cerebroprotective; antiParkinsonian; nootropic; neuroleptic; antipsoriatic.

MECHANISM OF ACTION - Gene therapy.

No biological data is given.

USE - (IX) is useful for treating a disease or condition associated with decreased expression or overexpression of PPHKP. (I) or its fragments useful to screen for compounds that bind to (I) or modulate the activity of (I). (All claimed). (I) and (II) are useful in diagnosis, treatment and prevention of gastrointestinal disorders such as dysphagia, dyspepsia, indigestion, gastritis, anorexia, nausea pyrosis, gastroenteritis, hepatitis, Crohn's disease, Whipple's disease, Mallory-Weiss syndrome, irritable bowel syndrome, diarrhea, constipation, jaundice Wilson's disease, Reye's syndrome; immune system disorders such as acquired immunodeficiency syndrome (AIDS), Addison's disease, adult respiratory distress syndrome, anemia, asthma, atherosclerosis, autoimmune thyroiditis, diabetes mellitus, Good pasture's syndrome, gout, Grave's disease, Hashimoto's thyroiditis, multiple sclerosis, myasthenia gravis, osteoporosis, pancreatitis, Reiter's syndrome, rheumatoid arthritis, Sjogren's syndrome, systemic lupus erythematosus, Werner syndrome, bacterial, fungal, parasitic, protozoal, and helminthic infections, and trauma; neurological disorders such as epilepsy, stroke, Alzheimer's disease, Pick's disease, Huntington's disease, dementia, Parkinson's disease, kuru, Creutzfeldt-Jakob disease, and Gerstmann-Straussler-Scheinker syndrome, Tourette's disorder; and cell proliferative disorders

such as bursitis, cirrhosis, psoriasis, leukemia, lymphoma, melanoma, myeloma, sarcoma, and cancer. (I) is useful for analyzing the proteome of a tissue or cell type and for screening libraries of compound in various drug screening techniques. (II) is useful in somatic or germline gene therapy and in diagnosis of that diseases. (II) is useful for creating transgenic humanized animals (pigs) or transgenic animals (mice or rats) to model human diseases. (II) is useful for generating hybridization probes useful in mapping the naturally occurring genomic sequence. (VI) is useful for the diagnosis of disorders characterized by expression of PPHKP, or in assays to monitor patients being treated with PPHKP or agonist, antagonist or inhibitors of PPHKP. (VI) is useful as elements on a microarray which is useful to monitor or measure protein-protein interactions, drug-target interaction, and gene expression profiles. Dwg.0/0

L27 ANSWER 14 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-202934 [20] WPIDS
DNN N2001-144769 DNC C2001-060329
TI Novel **protein** chip comprising several **probe proteins** fixed in a defined arrangement on a microsolid substrate useful for mass diagnosis or analysis of **target proteins** in test samples quantitatively or qualitatively.
DC B04 D16 S03
IN KIM, S Y; PARK, E J; YOON, G J; KIM, S; PARK, E; YOON, K
PA (KIMS-I) KIM S Y; (DIAC-N) DIACHIP LTD
CYC 94
PI WO 2001014425 A1 20010301 (200120)* EN 59p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
KR 2000071894 A 20001205 (200131)
AU 2000067356 A 20010319 (200136)
ADT WO 2001014425 A1 WO 2000-KR928 20000819; KR 2000071894 A KR 1999-34427 19990819; AU 2000067356 A AU 2000-67356 20000819
FDT AU 2000067356 A Based on WO 200114425
PRAI KR 1999-34427 19990819
AB WO 200114425 A UPAB: 20010410
NOVELTY - **Protein** chip (I) for mass diagnosis or analysis of test samples (T), has microsolid substrate (MSS) on which many spots of **probe proteins** (II) are fixed in defined arrangement, is new. 0.1 pg of (II) which is an antigen, receptor or **enzyme** is fixed per spot on MSS via bonds between amino **groups** of (II) and **functional groups** of chemicals coated on MSS. (II) is capable of binding to **target proteins** in (T).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) manufacturing (I) involves the following:

(i) arraying mixtures of a coating buffer and one or more kinds of (II) at predetermined locations on MSS, with the quantity of the **proteins** per spot of 0.1 pg or more;

(ii) immobilizing (II) by incubating the substrate at room temperature;

(iii) fixing (II) on the substrate by immersing the substrate in 100% ethanol; and drying the substrate; and

(2) an automated system (III) for diagnosing in several subjects comprises (I) and the following:

(i) a first microarrayer capable of arraying one or more (II) in several spots on (I);

(ii) the second microarrayer controlled to perform sequentially allotting test samples exactly to the locations at which (II) is fixed on

(I);

(iii) washing (I) after reaction, and adding secondary antibodies to react with **target proteins** in (T); and

(iv) a fluorescence microscope or a micro chip reader for detecting the reaction between (II) and the **target proteins**.

USE - (I) is useful for analyzing **target proteins** present in (T) quantitatively or qualitatively which involves:

(i) reacting (T) with (I);

(ii) washing (I);

(iii) reacting (I) obtained with fluorescence substance (preferably, fluorescein isothiocyanate (FITC))-**conjugated** secondary antibodies specific for a **target protein** which is capable of binding (II) fixed on (I); and

(iv) detecting the reaction signals with a fluorescence microscope or a microchip reader.

(I) In this case, has antigenic **proteins** relating to two or more diseases fixed in divided sectors on it, so that each sector contains **proteins** different from those on other sectors, (T) is serum of a subject and the reaction signals detected with a fluorescence microscope or a microchip reader refer to diagnostic indications for the diseases in the subject. Alternately, (I) comprises antigenic **proteins** relating to a disease and test samples are sera of two or more subjects, and the reaction signals detected with a fluorescence microscope or a microchip reader refer to diagnostic indications for the diseases in the subjects. Optionally, (I) comprises antigenic **proteins** relating to two or more diseases and test samples are sera of two or more subjects, and the reaction signals detected with a fluorescence microscope or a microchip reader refer to diagnostic indications for the diseases in the subjects. The third step of the method is performed by an automatic microarrayer system (claimed).

(I) has a wide range of applicability such as diagnosis of various kinds of metabolic diseases and viral or bacterial infections, and **screening** of antagonist useful for the development of new medicines different from the DNA chip used for the genetic analysis or diagnosis of diseases caused by genetic abnormalities. (I) in addition to clinical diagnosis can also be used in researches for the kinetics of **enzymatic** reactions and **screening** antagonist or **ligands** which binds to the receptors of interest.

ADVANTAGE - (I) enables multipurpose diagnosis of various diseases even with the small amount of samples for a number of subjects at a time, with a high throughput. (I) includes feasibility for automation and rapidity of the diagnostic processes, and possibility of constructing profiles of specific diseases. Many samples can be analyzed at a time with high accuracy. The chip can perform simultaneously the diagnosis of several diseases in a subject, of one disease in several subjects and of several diseases in several subjects. The highly integrated structure of (I) makes a biochemical or immunological assay faster suitable for automation, precise and easy to handle. The automatic diagnostic system using (I) is more efficient in terms of time, labor, and resources other than **enzyme** linked immunosorbant assay (ELISA) or chemiluminescence immunoassay (CLIA).

DESCRIPTION OF DRAWING(S) - The figure shows the genome of human immunodeficiency virus used in the method and the cloning regions of gag and env antigens present in it.

Dwg.1/13

L27 ANSWER 15 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-168291 [17] WPIDS
DNC C2001-050161
TI Preparing telechelic polymer, useful in crosslinked plastics synthesis or as **ligands** for cell surface receptors, comprises polymerizing monomer in presence of ruthenium or osmium carbene catalyst followed by reaction with capping agent.

DC A17 A96 B04 D16 E19
IN KIESSLING, L L; STRONG, L E; GORDON, E J
PA (WISC) WISCONSIN ALUMNI RES FOUND; (KIES-I) KIESSLING L L; (STRO-I) STRONG L E
CYC 93
PI WO 2000078821 A1 20001228 (200117)* EN 62p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000066484 A 20010109 (200122)
US 6271315 B1 20010807 (200147)
US 6291616 B1 20010918 (200157)
US 2002007016 A1 20020117 (200212)
ADT WO 2000078821 A1 WO 2000-US40245 20000619; AU 2000066484 A AU 2000-66484 20000619; US 6271315 B1 US 1999-335430 19990617; US 6291616 B1 US 1999-336121 19990617; US 2002007016 A1 Div ex US 1999-335430 19990617, US 2001-888098 20010622
FDT AU 2000066484 A Based on WO 200078821; US 2002007016 A1 Div ex US 6271315
PRAI US 1999-336121 19990617; US 1999-335430 19990617; US 2001-888098 20010622
AB WO 200078821 A UPAB: 20020114
NOVELTY - Multivalent array is prepared by post-polymerization modification of a polymer backbone generated by a metal carbene-catalyzed ring opening metathesis polymerization (ROMP) system. The method comprises attaching desired pendant **functional groups** to preformed polymers prepared in the presence of ruthenium or osmium carbene catalyst(s).

DETAILED DESCRIPTION - Preparing a telechelic polymer comprises:

(i) polymerizing at least one monomer comprising at least one polymerizable group in the presence of at least one ruthenium or osmium carbene catalyst to form a polymer; and

(ii) combining the polymer with at least one capping agent to react the polymer with the capping agent, where either the carbene catalyst, the capping agent or both are functionalized, to give a terminally functionalized polymer.

INDEPENDENT CLAIMS are included for the following:

(1) a library comprising a plurality of multivalent arrays where each multivalent array is prepared as above;

(2) generating a library comprising a plurality of multivalent arrays comprising: (a) synthesizing each multivalent array as above; and (b) combining the multivalent array to generate a library;

(3) a functionalized capping agent (FA) of formula (I');

D = electron donating group;

R6 = an organic group that includes a latent reactive group selected from an azide, a nitro group, a disulfide, a hydrazine, a hydrazide, a hydroxylamine, an aldehyde, a ketone, an epoxide, a cyano group, an acetal, a ketal, a carbamate, a thiocyanate, an activated ester and an activated acid;

R7, R8 = H or an organic group;

(4) a functionalized carbene of formula (III);

M = Ru or Os;

X, X' = anionic **ligand**; or

X+X' = anionic bidentate **ligand**;

L, L' = neutral **ligand**; or

L+L' = bidentate neutral **ligand**;

R4 = inorganic group that includes a latent reactive group selected from an azide, an epoxide, a cyano group, an acetal, a ketal, a carbamate, a thiocyanate, an activated ester, an activated acid, a hydrazine and a hydrazone;

(5) solid-supported functionalized carbene of formula (V);

R' = H or an organic group;
LK = cleavable linker to a solid support;
(6) a method of preparing a multivalent array;
(7) polymer templates of formula (VII) and (VIII);
BB = backbone repeat unit which may be cyclic or acyclic, and may be the same or different in a random or block arrangement;
R1', R2' = H or an organic group, which may be connected such that they form a ring;
provided that at least one of R1' and R2' includes a protected amine or an activated ester;
R4'-R7' = H or organic group;
Z = H, halide, hydroxyl, thiol or amine;
n = average number of repeating monomer units;
(8) a kit comprising the polymer template (VIII) and instruction means for using functionalizing reagent to attach a pendant functional group to the polymer template;
(9) a library which comprises a plurality of multivalent arrays.
USE - For synthesizing multivalent arrays and combinatorial libraries of multivalent arrays such as functionalized polymers (including short oligomers), libraries of oligomeric substances that differ in type and number of functional groups, terminal functionality and in length. The functionality may include those which allow for immobilization on a substrate, are capable of fluorescence allowing for the creation of a molecular probe that can be used to visualize a receptor-ligand interaction on a cell surface. For synthesizing multivalent arrays of biologically relevant binding epitopes. Multivalent arrays have applications in fields such as pharmaceuticals, medical devices, sensors and optical materials, especially in medical and biotechnology areas where the binding of cell surface receptors to particular epitopes of multivalent arrays can trigger a wide variety of biological responses. Multivalent arrays induce the release of a cell surface protein. Libraries of multivalent arrays are useful in screening and selection of multivalent arrays that exhibit a desired function, especially libraries for screening for various biological activities (e.g. cell surface binding, biological signal effects etc.). In protein-carbohydrate recognition processes, multivalent saccharide-substituted arrays can exhibit increased avidity, specificity, and unique inhibitory potencies under dynamic shear flow conditions. Due to their ability to span large distances, linear multivalent arrays of varying length and epitope density are particularly useful for probing structure-function relationships in biological systems. For producing random copolymers and block copolymers. Attached functional groups may provide a recognition element (i.e. binding site) for biological entity e.g. cell surface receptor or it may be generally unreactive so that the resultant polymers may be bioactive or biocompatible. Telechelic polymers are useful in the synthesis of crosslinked plastics.
ADVANTAGE - Unlike conventional ROMP methods that incorporate the desired pendant functional groups into the monomers followed by polymerization, the present methods attach the desired pendant functional groups to preformed polymers which provide better control and access to wider variety of materials than previous methods and give rise to materials with unique surfaces or ligands for a wide variety of natural and synthetic receptors. The present methods provide ability to control the number, type and position of pendant functional groups as well as selected functionality at the polymer ends. The method allows generation of block copolymers where the length of each block of monomers can be controlled. The present method of block copolymer formation allows formation of polymers with selected spacing between functional groups, allows synthesis of multivalent arrays of defined length, defined density of functional groups, defined distance between functional groups, defined combination of different functional groups (relative number and spacing), defined position of the same or different functional groups and defined groupings of functional groups. Further disadvantage of the conventional

methods avoided by the present method include having to synthesize a new functionalized cyclic olefin monomer for each polymer class to be produced. The physical properties of each monomer e.g. its solubility, electron density and strain of the cyclic olefin result in different rates of initiation, propagation and non-productive termination of the reaction, and purification of the desired products can be complicated, which all hinder large-scale syntheses of multivalent arrays. In contrast, terminal attachment of functional groups to preformed polymer backbone generated by a metal carbene-catalyzed ROMP system facilitates purification, allowing its use in large-scale production. Preferred methods of the present process give relatively high yields, are convenient and/or efficient in the preparation of polymers of e.g. varying average lengths, varying epitope density and varying functionality.
Dwg.0/16

L27 ANSWER 16 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-159282 [16] WPIDS
DNN N2001-116091 DNC C2001-047292
TI Platform for use in analyzing samples simultaneously, comprises an optically transparent substrate having a refractive index (n1), and a thin, optically transparent layer having a greater refractive index than n1.
DC A89 B04 D16 J04 S03
IN BUDACH, W E G; NEUSCHAEFER, D
PA (NOVS) NOVARTIS AG
CYC 93
PI WO 2001002839 A1 20010111 (200116)* EN 69p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000058243 A 20010122 (200125)
ADT WO 2001002839 A1 WO 2000-EP6238 20000703; AU 2000058243 A AU 2000-58243 20000703
FDT AU 2000058243 A Based on WO 200102839
PRAI GB 2000-11420 20000511; GB 1999-15703 19990705
AB WO 200102839 A UPAB: 20010323
NOVELTY - A platform for use in sample analysis comprising an optically transparent substrate having a refractive index (n1), and a thin, optically transparent layer, which is formed on one surface of the substrate, having a refractive index (n2) greater than n1, is new.

DETAILED DESCRIPTION - A new platform has incorporated corrugated structures comprising periodic grooves which define sensing areas or regions, each for capture elements. The grooves are profiled, dimensioned and oriented so that either:

(a) coherent light incident on the platform is diffracted into individual beams or diffraction orders which interfere resulting in the reduction of the transmitted beam and an abnormal high reflection of the incident light, thus generating an enhanced evanescent field at the surface of the sensing areas; or

(b) coherent and linearly polarized light incident on the platform is diffracted into individual beams or diffraction orders which interfere resulting in almost total extinction of the transmitted beam and an abnormal high reflection of the incident light, thus generating an enhanced evanescent field at the surface of the sensing areas.

INDEPENDENT CLAIMS are also included for the following:

(1) an apparatus for analyzing samples comprising a platform, for generating a light beam and for directing the beam so that it is incident upon the platform at an angle which causes evanescent resonance to occur in the platform, thus creating an enhanced resonant field in the sensing area of the platform, and for detecting a characteristic of a material

disposed on or in the vicinity of the sensing area of the platform; and

(2) analyzing sample(s) by bringing the sample into contact with the sensing area of a platform, irradiating the platform with a light beam such that evanescent occurs within the sensing area of the platform, and detecting radiation emanating from the sensing area.

USE - The platform is useful in sample analysis. The process may be used in one or more of the following: gene expression, genomics, pharmacogenomics, toxicogenomics, toxicoproteomics, genetics, pharmacogenetics, toxicogenetics, exon/intron expression profiling, human leukocyte antigens (HLA) typing, analysis of splicing variants, **proteomics** (on-chip **protein** assays), patient monitoring (drug, metabolites, and markers), point-of-care personalized medicine, diagnostics, on-chip 2d gels for **proteomics**, single nucleotide polymorphism mini-sequencing, high throughput **screening**, combinatorial chemistry, **protein-protein** interaction, molecular interaction, chip-based **protein**-antibody and peptide interaction, green fluorescent **protein**, in-situ hybridization, confocal microscopy, fluorescence correlation spectroscopy, conventional microscopy, and MALDI-TOF MS (mass spectroscopy) (all claimed).

ADVANTAGE - Compared with previous techniques of analyzing samples, the new method allows multiple samples to be analyzed simultaneously in an extremely sensitive, reliable and quantitative manner. Luminescence crosstalk and local light intensities are well defined, and true multiplexing is allowed. The method is simple and requires solely simple adjustment of the angle of incident light beam.

DESCRIPTION OF DRAWING(S) - The figure shows an apparatus for analyzing optical parameters and evanescent resonance condition of a platform.

glass substrate 30
grooves 31
optically transparent metal oxide layer 32
grooves 33
Dwg.2/10

L27 ANSWER 17 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-060972 [07] WPIDS
DNC C2001-016756
TI Oligomers comprising L-ribo-Locked Nucleic Acid (LNA) nucleosides, useful for therapeutic purposes e.g. in the construction of oligonucleotides, as substrates for nucleic acids polymerases and in RNA mediated catalytic processes.
DC B05 D16
IN WENGEL, J
PA (EXIQ-N) EXIQON AS
CYC 92
PI WO 2000066604 A2 20001109 (200107)* EN 79p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000043918 A 20001117 (200111)
ADT WO 2000066604 A2 WO 2000-DK225 20000504; AU 2000043918 A AU 2000-43918 20000504
FDT AU 2000043918 A Based on WO 200066604
PRAI DK 2000-32 20000111; DK 1999-603 19990504; DK 1999-1225 19990901
AB WO 200066604 A UPAB: 20010202
NOVELTY - An oligomer comprising L-ribo-LNA nucleoside analogs (I) is new.

DETAILED DESCRIPTION - An oligomer comprising L-ribo-LNA nucleoside analogs of formula (I) is new.

X = O, S, -N(RN'')- or -C(R6R6'')-;

B = 1-4C alkoxy,1-4C alkyl, 1-4C acyloxy (all optionally substituted), H, OH, nucleobases, DNA intercalators, photochemically active groups, thermochemically active groups, chelating groups, reporter groups or **ligands**;

P = a radical position for an internucleoside linkage to a succeeding monomer, or a 5'-terminal group, both optionally substituted by R5 or R5'';

P' = an internucleoside linkage to a preceding monomer, or a 3'-terminal group;

R2'', R4'' = biradicals consisting of 1-4 groups/atoms selected from -C(RaRb)-, -C(Ra)=C(Ra)-, -C(Ra)=N-, O, -Si(Ra)2-, S, SO2, -N(Ra)- or -(C=Z);

Z = O, S or -N(Ra)-;

Ra, Rb = e.g. H, 1-12C alkyl, 2-12C alkenyl, 2-12C alkynyl (all optionally substituted), OH, 1-12C alkoxy, 2-12C alkenyloxy, carboxy, 1-12C alkoxycarbonyl, 1-12C alkylcarbonyl, formyl, aryl, aryloxycarbonyl, aryloxy, arylcarbonyl, heteroaryl, amino, mono- or di-(1-6C alkyl)-amino, carbamoyl,or where two geminal substituents Ra and Rb together may designate optionally substituted methylene olefin (=CH2);

R1'', R2, R3'', R5, R5'', R6, R6'' = e.g. H, 1-12C alkyl, 2-12C alkenyl, 2-12C alkynyl (all optionally substituted), OH, 1-12C alkoxy, 2-12C alkenyloxy, carboxy, 1-12C alkoxycarbonyl, 1-12C alkylcarbonyl, formyl or aryl

RN = H or 1-4C alkyl and where two adjacent (non-geminal) substituents may designate an additional bond resulting in a double bond; and

RN'' = H or 1-4C alkyl;

INDEPENDENT CLAIMS are also included for:

(1) nucleoside analog monomers of formula (II);

(2) **conjugates** of L-ribo-LNA modified oligonucleotides and **proteins**, amplicons, **enzymes**, polysaccharides, antibodies, haptens, peptides or PNA;

(3) A kit for the isolation, purification, amplification, detection, quantification or capture of natural or synthetic nucleic acids comprising a reaction body and one or more L-ribo-LNA modified oligonucleotides (oligomer).

Q, Q'' = H, N3, halo, CN, NO2, OH, Prot-O-, Act-O-, SH, Prot-S, Act-S-, 1-6C alkylthio, NH2, Prot-N(RH)-, Act-N(RH)-, mono or di-(1-6C alkyl)-amino, or 1-6C alkoxy, 1-6C alkyl, 2-6C alkenyl, 2-6C alkenyloxy, 2-6C alkynyl or 2-6C alkynyloxy (all optionally substituted), monophosphate, diphosphate, triphosphate, DNA intercalator, photochemically active group, thermochemically active group, chelating group, reporter group, **ligand**, COOH, sulfono, CH2OH, Prot-O-CH2-, Act-O-CH2-, CH2NH2, Prot-N(RH)-CH2-, Act-N(RH)-CH2-, COOMe or sulfonomethyl;

Prot = protecting group for -OH, SH, or -NH(RH) respectively;

Act = activating group for -OH, -SH, or (NH(RH) respectively;

RH = H or 1-6C alkyl;

R2'', R4'' = O, -(CR''R'')r+s+1-, -(CR''R'')r-O-(CR''R'')s-, -(CR''R'')r-S-(CR''R'')s-, -(CR''R'')r-N(R'')-(CR''R'')s-, -O-(CR''R'')r+s-O-, -S-(CR''R'')r+s-O-, -O-(CR''R'')r+s-S-, -N(R'')-(CR''R'')r+s-O-, -O-(CR''R'')r+s-N(R'')-, -S-(CR''R'')r+s-S-, -N(R'')-(CR''R'')r+s-N(R'')-, -N(R'')-(CR''R'')r+s-S- or -S-(CR''R'')r+s-N(R'')-;

R'' = H, halo, N3, CN, NO2, OH, SH, NH2, mono- or di-(1-6C alkyl)-amino, optionally substituted 1-6C alkoxy, optionally substituted 1-6C alkyl, DNA intercalators, photochemically active groups, thermochemically active groups, chelating groups reporter groups or **ligands** or R''-C-C-R'' = a bond;

r, s = 0 to 3 provided that r+s = 1 to 4;

with the proviso that any chemical group (including any nucleobase) which is reactive under the conditions prevailing in oligonucleotide synthesis, is optionally **functional group** protected.

Full definitions are given in the Definition FULL DEFINITIONS field.

ACTIVITY - No relevant **biological** data is included.

MECHANISM OF ACTION - None given.

USE - (I) are useful for preparation of the **conjugates** of the L-ribo-LNA modified oligonucleotides (oligomers), as a substrate for **enzymes** active on nucleic acids e.g. DNA and RNA polymerases, for therapeutic or diagnostic purposes, in the construction of a solid surface onto which LNA modified oligonucleotides of different sequences are attached, in the sequence specific cleavage of target nucleic acids, in various therapies e.g. antisense, antigene or gene activating therapy. Complexes of more than one L-ribo-LNA modified nucleotide are also useful for these therapies.

(I) is useful as an aptamer in molecular diagnostics and in RNA mediated catalytic processes, as an aptamer in specific binding of antibiotics, drugs, amino acids, peptides, structural **proteins**, **protein** receptors, **protein enzymes**, saccharides, polysaccharides, biological cofactors, nucleic acids or triphosphates, as an aptamer in the separation of enantiomers by stereospecific binding, for the labelling of cells or to hybridize to non-**protein** coding cellular RNAs, e.g. tRNA, rRNA, snRNA and scRNA in vitro or in vivo.

(I) may be used in the construction of an oligonucleotide comprising a fluorophor and a quencher, positioned in such a way that the hybridized state of the oligonucleotide can be distinguished from the unbound state of the oligonucleotide by an increase in the fluorescent signal from the probe. (I) may be used for purification of, and capture and detection, of naturally occurring doubly stranded or single stranded nucleic acids e.g. DNA or RNA.

The L-ribo-LNA modified oligonucleotide (I) is used in diagnostics e.g. for the isolation, purification, amplification, detection, identification, quantification or capture of natural or synthetic nucleic acids (all claimed).

ADVANTAGE - The oligomers comprising L-ribo-Locked Nucleic Acid (LNA) nucleosides have high affinity for complementary nucleic acids. Use of the alpha -L-ribo-LNA may allow targeting of tRNAs, rRNAs, snRNAs and scRNAs, thus allowing their use as antisense targets. When derivatives of L-ribo-LNAs are incorporated into partly modified oligonucleotides, they decrease the affinity of these modified oligionucleotides for both complementary DNA and RNA compared to the unmodified nucleotides. However, when incorporated into fully L-ribo-LNA modified oligonucleotides, a dramatic increase in hybridization properties for both complementary ssDNA and ssRNA is observed. The alpha -L-ribo-LNA, a special variant of the L-ribo-LNAs, in addition to the described properties, has an ability to discriminate between RNA and DNA targets when hybridizing. Depending on the application, the use of fully modified L-ribo-LNA nucleotides thus offers the possibility of either greatly increasing the affinity of a standard oligonucleotide without compromising specificity, significantly increasing the specificity without compromising affinity or specifically hybridizing to RNA targets.

Dwg.0/4

L27 ANSWER 18 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-423449 [36] WPIDS
DNC C2000-128268
TI Composition for identifying target sequence of nucleic acids for detecting genetic-diseases and pathogens in food and water, comprises non-nucleotide **probe** which sequence specifically hybridizes to target sequence.
DC B04 D16 J04
IN COULL, J M; FIANDACA, M J; HYLDIG-NIELSEN, J J; JOHANSEN, J T
PA (BOST-N) BOSTON PROBES INC
CYC 73
PI WO 2000034521 A1 20000615 (200036)* EN 82p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AL AU BA BB BG BR CA CN CU CZ EE GE HU IL IN IS JP KP KR LC LK LR LT LV MG MK MN MX NO NZ PL RO SG SI SK SL TR UA US UZ VN YU

AU 2000017514 A 20000626 (200045)

EP 1137807 A1 20011004 (200158) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

ADT WO 2000034521 A1 WO 1999-US28966 19991208; AU 2000017514 A AU 2000-17514 19991208; EP 1137807 A1 EP 1999-960659 19991208, WO 1999-US28966 19991208

FDT AU 2000017514 A Based on WO 200034521; EP 1137807 A1 Based on WO 200034521

PRAI US 1998-111439P 19981208

AB WO 200034521 A UPAB: 20000801

NOVELTY - A composition (I) comprising a matrix, a nucleic acid **molecule** (NA) comprising a **target** sequence which is electrostatically bound to the matrix under suitable electrostatic binding conditions and a non-nucleotide **probe** comprising a probing nucleobase sequence which is sequence specifically hybridized to a portion of one or more target sequences, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method for the detection, identification or quantitation of a target sequence (or of two or more target sequences) of a (or one or more) nucleic acid molecule(s) in a sample comprising:

(i) contacting the sample with a matrix and at least one (or two independently detectable non-) nucleotide **probe**(s);

(a) where the nucleic acid molecule(s) will electrostatically bind to the matrix under suitable electrostatic binding conditions; and

(b) where the non-nucleotide **probe**(s) will hybridize, under suitable hybridization conditions to at least a portion of the target sequence if present in the sample; and

(ii) detecting, identifying or quantitating the non-nucleotide **probe**/target sequence complex as a means to detect, identify or quantitate the (or each) target sequence in the sample;

(2) a method for the detection, identification or quantitation of a **target** sequence of a nucleic acid **molecule** in a sample comprising:

(a) contacting the sample with at least one non-nucleotide **probe** where the non-nucleotide **probe** will hybridize, under suitable hybridization conditions, to at least a portion of the target sequence if present in the sample;

(b) contacting the sample with a matrix where the nucleic acid molecule will electrostatically bind to a matrix under suitable electrostatic binding conditions;

(c) contacting the sample with one or more **enzymes** capable of degrading sample contaminates including the nucleic acid molecule but not the non-nucleotide **probe**/target sequence complex at a timer after performing step (a); and

(d) detecting, identifying or quantitating the non-nucleotide **probe**/target sequence complex at a time after performing in (b) as a means to detect, identify or quantitate the target sequence in the sample;

(3) a method for the detection, identification or quantitation of a **target** sequence of a nucleic acid **molecule** electrostatically immobilized at a location on an array comprising nucleic acid molecules electrostatically bound at unique locations comprising:

(a) contacting the array with at least one non-nucleotide **probe** which will hybridize, under suitable hybridization conditions to at least a portion of the target sequence if present on the array; and

(b) detecting, identifying or quantitating the non-nucleotide **probe**/target sequence complex electrostatically bound at a unique location on the array as the means to determine the presence, absence or

amount of target sequence present at the unique array location;

(4) a method for the detection, identification or quantitation of a **target** sequence of a nucleic acid **molecule** which may be present in any of 2 or more samples of interest, comprising:

(a) mixing each of the two or more samples of interest with at least one non-nucleotide **probe** under suitable hybridization conditions;

(b) contacting a matrix under suitable electrostatic binding conditions with at least a portion of each of the two or more samples to therefore electrostatically immobilize the nucleic components of each sample to the matrix, each at a unique location and therefore creating a matrix array of samples; and

(c) detecting, identifying or quantitating the non-nucleotide **probe**/target sequence complex which is electrostatically bound at a unique location on the matrix sequence in each of the two or more samples; and

(5) a kit for the analysis of a sample containing a nucleic acid **molecule** comprising a **target** sequence comprising a matrix and at least one non-nucleotide **probe** having a probing nucleobase sequence which sequence specifically hybridizes under suitable hybridization conditions, to at least a portion of the target sequence sought to be detected.

USE - (I) is useful for detecting, identifying or quantitating a target sequence of a NA in a sample by contacting the sample with (I) and detecting the non-NT **probe**/TA complex in the sample. The assay is used to detect, identify or quantitate one or more single point mutations present in a NA, where one or more non-target **probes** are added to the assay to improve the single point mutation discrimination of the assay. (I) is also useful for distinguishing single point mutations in one or more NAs which may be present any of two or more samples. (II) is useful for detecting organisms in food, beverages, water, pharmaceutical products, personal care products, daily products, environmental samples and to test raw materials products or processes. (II) is also useful to perform a homogeneous assay, to examine clinical samples such as specimens or equipment, fixtures and products used to treat humans or animals and to detect a TA specific for a genetically based disease and in forensic technique such as prenatal **screening**, paternity testing, identity confirmation or crime investigation (all claimed).

ADVANTAGE - The method is rapid, sensitive, reliable and versatile in detecting target sequences which are particular to organisms found in food, beverages, water and pharmaceutical products. Non-nucleotide **probe**/TA is protected against degradation by **enzymes** and hence the sample can be treated with **enzymes** to degrade sample contaminants. The method facilitates simple processing and analysis of samples, particularly complex biological samples under wide range of assay conditions.

Dwg.0/6

L27 ANSWER 19 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-412037 [35] WPIDS
DNN N2000-308007 DNC C2000-124869
TI New electrically conductive, electroactive functionalized **conjugated** polypyrroles are useful as scavengers for biological **ligands** and for detecting and assaying biological **ligands**.
DC A26 A96 B04 D16 E19 S03 X12
IN GARNIER, F
PA (INMR) BIO MERIEUX
CYC 21
PI WO 2000031750 A1 20000602 (200035)* EN 63p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: CA JP

EP 1138048 A1 20011004 (200158) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT WO 2000031750 A1 WO 1999-IB1947 19991118; EP 1138048 A1 EP 1999-972771 19991118, WO 1999-IB1947 19991118
FDT EP 1138048 A1 Based on WO 200031750
PRAI US 1998-195544 19981119
AB WO 200031750 A UPAB: 20000725
NOVELTY - An electrically conductive, electroactive functionalized **conjugated** polymer (I') is new.
DETAILED DESCRIPTION - An electrically conductive, electroactive functionalized **conjugated** polymer of formula (I') is new.
n, p = 0 or integer;
R = H or group able to bond with a biological molecule or antiligand (C(O)O-(N-hydroxyphthalimide), C(O)O-(pentafluorophenol), electrochemical **probe** optionally bound to an activated ester) provided that at least one is a **functional group** and they are not all CH2C(O)OH; and
Y' = coupling arm.
An INDEPENDENT CLAIM is included for an electrically conductive, electroactive functionalized **conjugated** polymer of formula (II').
R' = H or a **functional group** able to bond with a biological molecule (polynucleotide or peptide sequence) or antiligand (C(O)O-(N-hydroxyphthalimide), C(O)O-(pentafluorophenol), electrochemical **probe** optionally bound to an activated ester).
provided that at least one R' is a **functional group** covalently bound to a biological molecule or antiligand.
USE - The polymers are useful as scavengers for biological **ligands** and for detecting and assaying biological **ligands** (e.g. polynucleotides and **enzymes** especially carboxypeptidase A) and may be deposited on a conductive substrate or be in the form of a self-supporting film or electrode.
ADVANTAGE - The polypyrroles allow preparation of electroactive and conductive polymers which are several millimeters thick thereby allowing a great density of functional sites and improved sensitivity.
Dwg.0/15

L27 ANSWER 20 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-399281 [34] WPIDS
DNC C2000-120488
TI Modulating the activity of I-kappaB kinases or cyclic nucleotide phosphodiesterases for the treatment of inflammatory disorders, autoimmune disorders (e.g. diabetes and Crohn's disease) and depression.
DC B04 B05
IN ARKHAMMAR, P O G; BJORN, S P; SCUDDER, K M; TERRY, B R; THASTRUP, O
PA (BIOI-N) BIOIMAGE AS
CYC 91
PI WO 2000023091 A2 20000427 (200034)* EN 128p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 9961899 A 20000508 (200037)
EP 1146888 A2 20011024 (200171) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT WO 2000023091 A2 WO 1999-DK567 19991015; AU 9961899 A AU 1999-61899 19991015; EP 1146888 A2 EP 1999-948735 19991015, WO 1999-DK567 19991015
FDT AU 9961899 A Based on WO 200023091; EP 1146888 A2 Based on WO 200023091
PRAI DK 1998-1323 19981015; DK 1998-1321 19981015; DK 1998-1322 19981015

AB WO 200023091 A UPAB: 20000718
NOVELTY - A method (A) for modulating the specific effectiveness of I-kappaB kinases or cyclic nucleotide phosphodiesterases which have the ability to cleave cyclic AMP and/or GMP (adenosine and guanine monophosphate, respectively), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) the use (I) of a substance, capable of modulating the specific effectiveness of a cyclic nucleotide phosphodiesterase or I-kappaB kinases through modulating the spatial distribution (or a change in spatial distribution) of the cyclic nucleotide phosphodiesterase or I-kappaB kinases within the cells of an animal, for the preparation of a pharmaceutical for the prevention and/or treatment of an adverse condition in an animal that may be reduced or abolished by modulating the activity of 1 or more cyclic nucleotide phosphodiesterase or I-kappaB kinases with the ability to cleave cyclic AMP (adenosine monophosphate) or cyclic GMP (guanine monophosphate) or by modulating the activity of 1 or more I-kappaB kinases;

(2) a method (II) for extracting quantitative information relating to an influence on a cellular response, comprising recording variation caused by the influence on a mechanically intact living cell (or cells) in spatially distributed light emitted from an luminophore (the luminophore is part of a fluorescent **probe** further comprising at least a part of a cyclic nucleotide phosphodiesterase or I-kappaB kinase, the fluorescent **probe** is present within the cells and is capable of being redistributed in a manner related to the degree of influence and/or of being modulated by a component capable of being redistributed in a manner related to the degree of influence, the association resulting in a modulation of the luminescence characteristics of the luminophore) and processing the recorded variation in the spatially distributed light to provide quantitative information correlating the spatial distribution to the degree of influence on the cellular response;

(3) a **screening** assay (III) for carrying out the method (II); and

(4) a nucleotide sequence (IV) encoding a polypeptide corresponding to amino acids 331-552 of a defined 552 amino acid sequence (A) given in the specification (or any 25 contiguous amino acid subsequence of that sequence) able to dislocate I-kappaB kinase when expressed in CHO (Chinese hamster ovary) cells under the control of the CMV (cytomegalovirus) promoter.

ACTIVITY - Antiinflammatory; antiasthmatic; antirheumatic; antiulcer; immunosuppressant; antidiabetic; dermatological; antithyroid; antibacterial; antidepressant.

MECHANISM OF ACTION - I-kappaB kinase and/or cyclic nucleotide phosphodiesterase modulator.

USE - (I) is used to prevent or treat diseases that may be reduced or abolished by modulating the activity of 1 or more cyclic nucleotide phosphodiesterase having the ability to cleave cyclic AMP or GMP (adenosine or guanine monophosphate) or by modulating the activity of 1 or more i-kappaB kinases. This involves modulating the specific effectiveness of the cyclic nucleotide phosphodiesterase or I-kappaB kinase by modulating the spatial distribution within cells of the animal. If the cyclic nucleotide phosphodiesterase used is a PDE3, PDE7,PDE8 or a splice variant of PDE4, (I) is used to treat inflammatory diseases such as chronic inflammation (CI) (especially CI airway diseases such as asthma and chronic bronchial hyper-reactivity of non-asthma etiology, CI joint disorders such as rheumatoid arthritis and pelvospondylitis and CI bowel diseases such as ulcerative colitis and Crohn's disease), autoimmune diseases associated with CI (such as rheumatoid arthritis, diabetes mellitus type I, systemic lupus erythromatosus, myasthenia gravis, Hashimoto's thyroiditis, Grave's disease and immune thrombocytopenic purpura), disregulations of the immune system (such as acute respiratory distress syndrome (ARDS) and septic shock) and/or depression.

Alternatively, if the cyclic nucleotide phosphodiesterase is PDE1, PDE2, PDE6, PDE9, PDE10 or a splice variant of PDE5, (I) is used to treat hypo- or hypertension, erectile dysfunction, circadian rhythm resetting or jet-lag. (I) is preferably used to treat a mammal, especially a human being (claimed).
Dwg.0/3

L27 ANSWER 21 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1999-580156 [49] WPIDS
CR 2000-052620 [54]
DNC C1999-168749
TI New bioreagents comprising dendrimers, used for bioassays such as DNA assays, immunoassays or **protein-ligand** interactions.
DC A11 A96 B04 D16 J04 K08
IN DRUKIER, A K; WILK, A
PA (BIOT-N) BIOTRACES INC
CYC 84
PI WO 9943287 A2 19990902 (199949)* EN 52p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9927880 A 19990915 (200004)
ADT WO 9943287 A2 WO 1999-US4068 19990225; AU 9927880 A AU 1999-27880 19990225
FDT AU 9927880 A Based on WO 9943287
PRAI US 1998-75859P 19980225
AB WO 9943287 A UPAB: 20011203
NOVELTY - New bioreagents for analytes comprise a linker arm forming moieties and reporter moieties on terminal branches
DETAILED DESCRIPTION - (A) A novel bioreagent which is a SuperTracer for an analyte of interest which has been labeled, comprises:
(1) a linker arm moiety;
(2) at least one forking moiety provided on the linker arm moiety and having terminal branches; and
(3) at least one reporter moiety provided on respective terminal branches of the at least one forking moiety, where the bioreagent:
(a) **conjugates** a predetermined number of labels;
(b) **conjugates** to biopolymers by use of the linker arm, and
(c) has a nonspecific biological background (NSBB) which is lower than 10 attomole/well of a microtiter plate.
INDEPENDENT CLAIMS are also included for the following:
(1) an assay for direct DNA quantitation comprising:
(a) providing a bioreagent as in (A) which is a SuperTracer;
(b) **conjugating** the bioreagent with a primary hybridization **probe**, which is preferably an oligonucleotide having a length ranging from 10 to 200 bases, to provide a **conjugate**; and
(c) subjecting target DNA to the **conjugate**;
(2) a bioreagent having a structure: (linker)1 + (switch)i + (linker)2 + SuperTracer (structure (I)); where (linker)1, (linker)2 and SuperTracer are polymers;
(3) a method for improving immunoassay sensitivity to improve the limits of detection (LOD) comprising at least one of:
(a) using secondary antibodies in parallel to increase signal;
(b) using a SuperTracer to amplify signal;
(c) using a multi photon detection (MPD) instrumentation to quantitate signals at sub-attomole levels;
(d) using a technique to diminish NSBB, preferably an exponential wash; and
(e) using a releasable (Switch) to permit independent quantitation of remaining NSBB;
(4) an immunoassay having improved lod using a SuperTracer with an

oligonucleotide linker and which comprises:
(a) capturing a target on a solid-surface using an antibody Ab1;
(b) stringent washing;
(c) **conjugating** to the captured target of (Ab2 + DNA) construct;
(d) stringent washing;
(e) blocking using a blocker, preferably a noniodinated SuperTracer;
(f) stringent washing;
(g) adjusting at least one of pH and temperature to levels for DNA hybridization;
(h) applying a radiolabeled SuperTracer with DNA linker(s);
(i) stringent washing; and
(j) quantitating using MPD instrumentation;
(5) a kit of bioreagents of structure (I) where (linker)1, (linker)2 and SuperTracer are polymers and are always the same constituent, respectively, where only (switch)i is a variable constituent, and where the linkers can be implemented in ways which include either as a chain of polypeptides or as oligonucleotides;
(6) a bioreagent with high affinity for an analyte of interest comprising:
(a) a linker arm terminal moiety, R1 which has an affinity for the analyte of interest;
(b) a linker arm which is a polymer having a chain length to mitigate steric interference between R1 and a forking moiety;
(c) a forking moiety comprised of a substance having a spherical branched polymer structure including terminal functional groups; and
(d) at least one reporter moiety, R2, provided on respective terminal functional groups of the forking moiety.
USE - The bioreagents can be used in bioassays, including DNA assays, immunoassays and protein-ligand interactions.
ADVANTAGE - The bioreagents provide extraordinary signal amplification, e.g. allowing fast measurement of a single copy or a few copies of DNA. They can provide assays capable of attamole sensitivity with low NSBB.
Dwg.0/12

L27 ANSWER 22 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1999-458483 [38] WPIDS
DNN N1999-342931 DNC C1999-134644
TI Conducting assay of sample containing analyte using metal-**ligand** complexes for life-timebased sensing, a display of polarized emission, increased emission and photosensitivity.
DC B02 B04 D16 S03
IN CASTELLANO, F; LAKOWICZ, J R; MURTAZA, Z
PA (LAKO-I) LAKOWICZ J R
CYC 21
PI WO 9936779 A1 19990722 (199938)* EN 88p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: CA JP
US 6214628 B1 20010410 (200122)
ADT WO 9936779 A1 WO 1999-US774 19990114; US 6214628 B1 US 1998-7167 19980114
PRAI US 1998-7167 19980114
AB WO 9936779 A UPAB: 19990922
NOVELTY - A method for conducting an assay of a sample containing an analyte of interest, comprises:
(a) forming a mixture to bring a metal-**ligand** complex into interactive proximity with the sample containing an analyte of interest;
(b) irradiating the mixture with electromagnetic light energy; and
(c) measuring the emitted light and utilizing the measurement of the emitted light to measure the analyte of interest.
DETAILED DESCRIPTION - A method for conducting an assay of a sample containing an analyte of interest, comprises:
(a) forming a mixture to bring a metal-**ligand** complex into

interactive proximity with the sample containing an analyte of interest;
(b) irradiating the mixture with electromagnetic light energy to cause a emission of light indicative of the analyte of interest; and
(c) measuring the emitted light and utilizing the measurement of the emitted light to measure the analyte of interest.
An INDEPENDENT CLAIM is also included for a metal-**ligand** complex of the formula, (Re (bcp) (CO)3 (4-COOHPy))+.
USE - The assay is useful for assaying a sample containing an analyte of interest for use in biophysics, clinical chemistry and immunoassays (especially fluorescence polarization for the analysis of biological systems e.g. the study of entire cells, viruses and other large macromolecules and complexes. It is also applicable to red fluorescent dyes for biophysics and for sensors and for studying hydrodynamics of molecules.
ADVANTAGE - The metal-**ligand** complexes allow life-time based sensing with low cost instrumentation. Lanthanide chelate compounds have longer decay times to allow gated detection and increased sensitivity for immunoassays and increased photostability in solvents.
Dwg.0/30

L27 ANSWER 23 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1999-357694 [30] WPIDS
DNC C1999-105815
TI Psoralen compounds and their salts, e.g. 3-(4-amino-2-oxa)butyl-4,4'-8-trimethyl-psoralen.
DC B02 B04 D22
IN NERIO, A; WOLLOWITZ, S
PA (CERU-N) CERUS CORP
CYC 23
PI WO 9926476 A1 19990603 (199930)* EN 53p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP
AU 9915929 A 19990615 (199944)
EP 1032265 A1 20000906 (200044) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
US 6133460 A 20001017 (200054)
ADT WO 9926476 A1 WO 1998-US24709 19981120; AU 9915929 A AU 1999-15929 19981120; EP 1032265 A1 EP 1998-960295 19981120, WO 1998-US24709 19981120; US 6133460 A Provisional US 1997-66224P 19971120, US 1998-196935 19981120
FDT AU 9915929 A Based on WO 9926476; EP 1032265 A1 Based on WO 9926476
PRAI US 1998-196935 19981120; US 1997-66224P 19971120
AB WO 9926476 A UPAB: 20010418
NOVELTY - Psoralen compounds and their salts are new.
DETAILED DESCRIPTION - Psoralen compounds comprise substituent A on the pyrone ring chosen from (CH2)u-NH2, (CH2)w-J-(CH2)z-NH2, (CH2)w-J-(CH2)x-K'-(CH2)z-NH2, (CH2)w-J-(CH2)x-K'-(CH2)y-L-(CH2)z-NH2;
J, K', L = O or NH;
u = 1-10;
w = 1-5;
x, y = 2-5; and
z = 2-6;
and substituents B, R3, R4, R5 and R6 on the pyrone ring, 5-, 4', 5'- and 8- C atoms, respectively (sic); chosen from H or (CH2)v-CH3;
v = 0-5.
An INDEPENDENT CLAIM is also included for inactivating pathogens in biological compositions comprising:
(a) providing, in any order, a compound chosen from primary amino-pyrone-linked psoralens and primary amino-benzene-linked psoralens, photoactivating means for photoactivating the compounds and biological composition suspected of being contaminated with a pathogen containing a nucleic acid;
(b) adding the compound to the biological composition; and
(c) photoactivating the compound to inactivate the pathogen.

ACTIVITY - Antimicrobial; anti-proliferative.

Small aliquots of three test compounds were added to stock HIV-1 to a compound concentration of 32 nM in 0.5 ml. The stock HIV-1 (105-107 plaque-forming units/ml) was in Dulbecco's Modified Eagle Medium (DMEM)/15% fetal bovine serum. The 0.5 ml test aliquots were placed in 24-well polystyrene tissue culture plates and irradiated with 320-400 nm for 1 minute. Controls included HIV-1 stock only, HIV-1 plus ultraviolet (UV)A only and HIV-1 plus highest concentration of each psoralen tested without UVA. Post-irradiation, all samples were stored frozen at -70 deg. C until assayed for infectivity by a microtiter plaque assay. Aliquots for measurement of residual HIV infectivity in the samples were withdrawn and cultured. Residual HIV infectivity was assayed using and MT-2 infectivity assay using assay medium containing 85% DMEM (with high glucose concentration) containing streptomycin (100 micro g/ml), penicillin (100 U/ml), gentamicin (50 micro g/ml), amphotericin B (1 micro g/ml), fetal bovine serum (15%) and Polybrene (RTM) (2 micro g/ml). Test and control samples from the inactivation procedure were diluted in a mixture of 50% assay medium and 50% normal human serum. The samples were diluted serially directly in 96-well plates. The plates were mixed on an oscillatory shaker for 30 seconds and incubated at 37 deg. C in a 5% carbon dioxide (CO2) atmosphere for 1-18 hours. MT-2 cells (0.025 ml; clone alpha -4) were added to each well to give a concentration of 80000 cells/well. After an additional 1 hour of incubation at 37 deg. C in 5% CO2, 0.075 ml assay medium containing 1.6% SeaPlaque agarose (RTM: agarose) pre-warmed to 38.5 deg. C was added to each well. The plates were kept at 37 deg. C for a few minutes until several pates (sic) had accumulated and then centrifuged in plate carriers at 600 g for 20 minutes. In the centrifuge, cell monolayers formed prior to gelling of the agarose layer. The plates were incubated for 5 days at 37 deg. C in 5% CO2 and stained by addition of 0.05 ml of 50 micro g/ml propidium iodine in phosphate-buffered saline (pH 7.4) to each well. After 24-48 hours, the orange fluorescence-stained microplaques were visualized by placing the plates on an 8000 micro W/cm2 304 nm UV light box. The plaques were counted at a magnification of x20 to x25 through a stereomicroscope. The log kill (log titer) of cell-free HIV with 1 minute irradiation with test compound at 32 micro M was 1.9 (5.3) for 3-aminomethyl-4,4,8-trimethylpsoralen hydrochloride, 3.5 (5.5) for 3-aminomethyl-4,4',5',8-tetramethylpsoralen and 1.1 (5.4) for 8-aminomethyl-4,4',5-trimethylpsoralen. The results confirm the compounds are effective in inactivating HIV with levels of inactivation comparable to those observed for AMT.

MECHANISM OF ACTION - Base pair intercalation; nucleic acid photoreactivity.

USE - Used to inactivate pathogens in biological compositions (claimed) and health-related products both in vivo and in vitro, particularly in blood products (plasma, platelet preparations, red-blood cells, packed red-blood cells, serum), blood, cerebrospinal fluid, saliva, urine, feces, semen, sweat, milk, tissue, tissue samples and homogenized tissue samples, and synthetic materials incorporating substances with origin in biological organism including vaccine preparations of alum and pathogen, cell-culture medium, cell cultures and viral cultures. Used for nucleic acid **probe** preparations, to prepare **conjugates** (with acridines, lexitropsins, **proteins** e.g. antibodies or receptor **ligands**, nucleic acids, small molecules useful in diagnostics e.g. fluorescent **probes** and biotin, and material surfaces), to inhibit cell proliferation, to inactivate virus for vaccine preparation and to inactivate pathogens in blood products. Used to provide new routes for synthesizing amino-psoralens and intermediates used to provide psoralens **conjugated** to other **functional groups**. Used in vivo (autologous or homologous reintroduction of human blood), in vitro (analysis of component of blood sample using laboratory equipment) and ex vivo (removal of blood from human and introduction of compound into blood to inactivate pathogens). Used to inactive nucleic-acid containing materials such as lymphocytes (to control

proliferation to prevent graft-versus-host disease in bone marrow transplants and inhibit smooth muscle cells to control proliferation after injury e.g. to prevent restenosis after balloon angioplasty), tissue cells and solutions containing nucleic acids e.g. solutions amplified by polymerase-chain reaction. Used to inactivate viruses including adenoviruses (adenovirus 2, canine hepatitis), arenaviruses (Pichinde, Lassa), bunyaviruses (Turlock, California encephalitis), herpesviruses (Herpes simplex 1 and 2, Cytomegalovirus, Pseudorabies), orothomyxoviruses (influenza), papovaviruses (SV-40), paramyxoviruses (measles, mumps, parainfluenza 2 and 3), picornaviruses during virus growth (poliovirus 1 and 2, Coxsackie A-9, Echo 11), poxviruses (vaccinia, fowl pox), reoviruses (reovirus 2, blue tongue, Colorado tick fever), retroviruses (HIV, avian sarcoma, murine sarcoma, murine leukemia), rhabdoviruses (vesticular stomatitis virus), togaviruses (Western equine encephalitis, Dengue 2 and 4, St. Louis encephalitis), hepadnaviruses (hepatitis B), bacteriophages (lambda, T2), and rickettsiaviruses (Rickettsia akari (rickettsiapox)).

ADVANTAGE - Have enhanced ability to inactivate pathogens in the presence of UV light. Are capable of binding to nucleic acid of pathogens. Provide means of inactivating pathogens whilst potentially retaining suitability of product for intended use.

Dwg.0/0

L27 ANSWER 24 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1998-560723 [48] WPIDS
DNN N1998-437148 DNC C1998-167998
TI Detecting gene of in vivo **target protein** of drug - comprises binding in vivo administered drug with antigenic substance via chemical crosslinker to give **probe** and directly **screening** gene of **protein** binding with **probe**.
DC B03 B04 D16 S03
IN HIDAKA, H; TANAKA, H
PA (HIDA-I) HIDAKA H
CYC 22
PI JP 10248571 A 19980922 (199848)* 4p
WO 9953094 A1 19991021 (199952)# JA
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: CA US
EP 1072688 A1 20010131 (200108)# EN
R: AT BE CH DE ES FR GB IT LI NL SE
ADT JP 10248571 A JP 1997-54661 19970310; WO 9953094 A1 WO 1998-JP1712 19980415; EP 1072688 A1 EP 1998-914021 19980415, WO 1998-JP1712 19980415
FDT EP 1072688 A1 Based on WO 9953094
PRAI JP 1997-54661 19970310; WO 1998-JP1712 19980415; EP 1998-914021 19980415
AB JP 10248571 A UPAB: 19981203
Detecting a gene of an in vivo **target protein** of a drug comprises binding an in vivo administered drug with an antigenic substance via a chemical crosslinker to give a **probe** and directly **screening** a gene of a **protein** binding with the **probe** using a cDNA expression library containing the administered in vivo gene.

The antigenic substance preferably comprises serum albumin or fluorescein isothiocyanate. The cDNA expression library uses a phage as a vector. The drug comprises non-**protein** substance without intrinsic antigenicity. A drug having no antigenicity or non-**protein** substance is bound with an antigenic substance via a chemical crosslinker e.g. a **group** crosslinking **functional groups** of the drug and antigenic substance including glutaraldehyde, hexamethylene diisothiocyanate, N,N'-ethylene bismaleimide and bisdiazobenzidine to give a **probe** by stirring at room temperature in a solvent. The **probe** is used to directly **screen** a gene of **protein** binding with the **probe**

ADVANTAGE - Direct and simple detection of a gene of a **target molecule** of a drug is effected without using a drug immobilising column. The method can identify a cellular factor such as a small amount of intranuclear transcription factor.
Dwg.0/0

L27 ANSWER 25 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1998-260961 [23] WPIDS
DNN N1998-205775 DNC C1998-080951
TI Synthesis of combinatorial libraries, notably of macrocyclic compounds, e.g., cyclophane(s) - by protection and reaction at specific nitrogen atoms, uses include diagnosis, therapy, and as agrochemicals.
DC B04 B05 D16 S03
IN COOK, P D
PA (ISIS-N) ISIS PHARM INC
CYC 78
PI WO 9810286 A1 19980312 (199823)* EN 166p
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9742480 A 19980326 (199832)
ADT WO 9810286 A1 WO 1997-US15493 19970904; AU 9742480 A AU 1997-42480 19970904
FDT AU 9742480 A Based on WO 9810286
PRAI US 1996-709160 19960906
AB WO 9810286 A UPAB: 19980610
A claimed combinatorial synthetic process comprises: (a) providing a first compound having **functional groups** F1 and F2; (b) placing a blocking group on F1; (c) reacting F2 with a first reagent pool (P1), containing at least 4 different reagents, to form a first mixture of adducts bonded covalently between F2 and the compounds of P1; (d) deblocking F1, to form a first mixture of deblocked compounds; and (e) reacting at least a portion with a second compound, to form a mixture of products bound covalently also at F1.

USE - The invention relates particularly to macrocyclic compounds, notably cyclophanes, macrocycles interrupted by small ring systems to provide two bridgehead atoms, connected to nitrogenous moieties. The nitrogenous sites can be derivatised singly to provide more diversity of compounds, and the technique above, using two sites F1 and F2, can be extended to cover further reactive groups, e.g., F3 and F4, by similar specific blocking, reacting, deblocking, and reacting the freed group cycles. Compounds of these types can have preorganised geometry which matches **target proteins**, **enzymes**, nucleic acids, lipids, and other biological materials. The combinatorial approach enables libraries of related compounds for **screening** for **biological activities** to be constructed rapidly. The **screening** may reveal compounds which are inhibitors of pathogens, e.g., viruses, mycobacteria, gram negative and gram positive bacteria, protozoa, and parasites; inhibitors of **ligand**-receptor interactions, e .g., PDGF (platelet derived growth factor), LTB4 (leucotriene B4), IL-6, and complement C5A; of transcription factors, e.g., p50 (NFkB **protein**) and fos/jun; of PLA-2 (phospholipase-A2); and of cell-based interactions, e.g. ICAM induction. The libraries can also be **screened** for diagnostic reagents, including those for the above therapeutic systems, or as assay and **probe** reagents. A third area is as metal chelators and contrast agent nuclei; and a fourth as agrochemicals, e.g., as herbicides and insecticides.

ADVANTAGE - The economies of time and labour possible by synthesis of

libraries of compounds for **screening** rather than individual compounds are well known.
Dwg.0/15

L27 ANSWER 26 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1997-384662 [35] WPIDS
CR 1983-736619 [33]; 1994-365411 [45]; 1996-332642 [33]; 1997-144407 [12]; 1997-144862 [13]; 1997-178398 [16]
DNN N1997-320292 DNC C1997-123264
TI New release tag compound used as analytical labelling agent - comprising reactivity group, linking group and signal group forming detectable volatile compound on cleavage.
DC B04 B05 D16 S03
IN ABDEL-BAKY, S; ALLAM, K; GIESE, R W
PA (UYNE-N) UNIV NORTHEASTERN
CYC 1
PI US 5650270 A 19970722 (199735)* 38p
ADT US 5650270 A Cont of US 1982-344394 19820201, CIP of US 1987-45089 19870504, US 1990-496251 19900320
FDT US 5650270 A Cont of US 4709016
PRAI US 1990-496251 19900320; US 1982-344394 19820201; US 1987-45089 19870504
AB US 5650270 A UPAB: 19970828
A novel release tag compound, for labelling substances for analytical purposes, is of formula Sg-CO-L-Rx (I). L (linking group) = O or NH; Rx (reactivity group) = phenylene connected to a reactive **functional group**; Sg (signal **group**) = 1-20C, C-bonded organic moiety selected from alkyl, ketoalkyl, alkenyl and alkynyl, where alkyl, ketoalkyl and alkyl are substituted by at least 2 electronegative groups E and alkynyl is substituted by at least one group E; E= halo, CN, dihalomethyl or trihalomethyl; provided that (i) if Sg = ketoalkyl, alkenyl or alkynyl, then Sg contains at least one moiety selected from beta -E-alkynyl, alpha -E-alkynyl, beta -E-keto, alpha -E-alkenyl and alpha -E- alpha -alkenyl (where the alpha -position is the carbon adjacent to the CO of -CO-L-Rx), (ii) if Sg = alkyl, the alpha -carbon bears at least 2 electronegative substituents but not more than one F and (iii) on cleavage of (I) at the COL portion, Sg is released in a volatile form suitable for electron capture de termination in the gas phase.
USE - Compounds labelled with (I) release a signal group in the form of a readily detectable volatile compound at a desired point in an analytical procedure. Typically (I) are used for labelling **proteins** (e.g. hormones, **enzymes**, antigens, antibodies, receptors or transport **proteins**), peptides, aminoacids, polynucleotides (e.g. genes, gene fragments and DNA **probes**), nucleotides, nucleosides, nucleobases, lipids, carbohydrates, drugs, cells, viruses, vitamins, coenzymes, **bioactive** amines, aflatoxins, polyaromatic hydrocarbons and pesticides. The labelled products may be used in analytical procedures such as the human genome project, testing for infectious diseases (e.g. AIDS) and genetic **screening**.
ADVANTAGE - By using different release tags, a large number of analytes in a sample can be determined simultaneously. Reactivity groups Rx can be varied to bond specifically and selectively to particular substances to be labelled, and cleavage can be carried out under particular desired conditions. The analytical method using the release tags is sensitive and widely applicable.
Dwg.0/2

L27 ANSWER 27 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1995-320308 [41] WPIDS
DNC C1995-142254
TI Adding peptide nucleic acid units to resin bound oligomer - using sub-monomer, or complete preformed monomer, synthon(s), used to construct

random or predefined sequences for **screening** for potential pharmaceuticals, also new amino acid-peptide nucleic acid chimaeras.

DC B04 D16

IN COOK, P D; KIELY, J; SPRANKLE, K

PA (ISIS-N) ISIS PHARM INC

CYC 60

PI WO 9523163 A1 19950831 (199541)* EN 103p
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KE KG KP KR KZ LK LT LU LV MD MG MN MW MX NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN
AU 9519261 A 19950911 (199550)
US 5539083 A 19960723 (199635) 38p
JP 09503523 W 19970408 (199724) 104p
EP 777678 A1 19970611 (199728) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
AU 684152 B 19971204 (199806)
EP 777678 A4 19970716 (199813)
US 5831014 A 19981103 (199851)
US 5864010 A 19990126 (199911)
JP 11209393 A 19990803 (199941) 39p
EP 777678 B1 19991013 (199947) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
DE 69512794 E 19991118 (200001)
US 6204326 B1 20010320 (200118)
CA 2183371 C 20010403 (200124) EN

ADT WO 9523163 A1 WO 1995-US2182 19950222; AU 9519261 A AU 1995-19261 19950222; US 5539083 A US 1994-200742 19940223; JP 09503523 W JP 1995-522421 19950222, WO 1995-US2182 19950222; EP 777678 A1 EP 1995-911848 19950222, WO 1995-US2182 19950222; AU 684152 B AU 1995-19261 19950222; EP 777678 A4 EP 1995-911848 19950222; US 5831014 A CIP of US 1994-200742 19940223, WO 1995-US2182 19950222, US 1996-693144 19960813; US 5864010 A Div ex US 1994-200742 19940223, US 1996-587648 19960117; JP 11209393 A Div ex JP 1995-522421 19950222, JP 1998-322576 19950222; EP 777678 B1 EP 1995-911848 19950222, WO 1995-US2182 19950222; DE 69512794 E DE 1995-612794 19950222, EP 1995-911848 19950222, WO 1995-US2182 19950222; US 6204326 B1 CIP of US 1994-200742 19940223, Cont of WO 1995-US2182 19950222, Cont of US 1996-693144 19960813, US 1998-131270 19980807; CA 2183371 C CA 1995-2183371 19950222, WO 1995-US2182 19950222

FDT AU 9519261 A Based on WO 9523163; JP 09503523 W Based on WO 9523163; EP 777678 A1 Based on WO 9523163; AU 684152 B Previous Publ. AU 9519261, Based on WO 9523163; US 5831014 A CIP of US 5539083, Based on WO 9523163; US 5864010 A Div ex US 5539083; EP 777678 B1 Based on WO 9523163; DE 69512794 E Based on EP 777678, Based on WO 9523163; US 6204326 B1 CIP of US 5539083, Cont of US 5831014; CA 2183371 C Based on WO 9523163

PRAI US 1994-200742 19940223; US 1996-693144 19960813; US 1996-587648 19960117; US 1998-131270 19980807

AB WO 9523163 A UPAB: 19991122
Additional peptide nucleic acid (PNA) units are added to an amino-terminated PNA oligomer (A) on a solid phase synthesis resin by: (1) reacting terminal NH2 in (A) with one reactive gp. in a bifunctional acetyl synthon (I); (2) reacting the prod. with an alkyldiamine synthon (II) in which one NH2 is protected and the other free so that the reactant gp. in (I) reacts with free NH2, forming a resin bound extended oligomer in which the extension contains sec. and protected amino gps.; (3) treating the prod. with an acetylnucleobase synthon (III) to form an amide bond between the sec. amino, producing a new protected, amino-terminated oligomer; (4) deprotecting the terminal gp., and (5) repeating steps (1) - (4) as often as required. In modifications: (a), to add random PNA units, a mixt. of different (III) is used in step (2) or the prod. of step (2) is divided into portions, reacted with individual (III) and then the portions mixed; (b) the starting oligomer is an NH2-terminated amino acid oligomer; (c) the method is used to produce mixed PNA-amino acid oligomers; (d) (II)

and (III) are replaced (in any modification) by a single alkyldiamine-acetylnucleobase synthon (IV); (e) in any modification, (A) is replaced by a 1-(2-carbonylmethylnucleobase)-3-oxo-morpholine synthon (V) to form a N-(2-(nucleobase)acetyl)-N-(hydroxyethyl)glycine end gp., and this converted to corresp. N-(aminoethyl)glycine gp., before the next reaction cycle; if, to add random PNA, (A) is reacted with PNA synthons contg. different nucleobases (opt. after division into portions); (g) an activated resin phase is reacted with a monoprotected diamine synthon (VI), deprotected, reacted sequentially with 2-haloacetate ester (VII) and 1-acetylnucleobase, deprotected to give a prod. with free COOH and covalently bound acetylnucleobase, then reacted with (VI). Also new are the cpds.: (AA)w-((PNA)u-(AA)v)x(PNA)y-(AA)z (VIII), where each AA and PNA are, respectively, same or different amino acid and peptide nucleic acid residues; u,v,x and y = 1-500; w and z = 0-500; the total of u,v,w,x,y and z is <500 (esp. <25).

USE - The methods are used to produce combinatorial libraries of oligomeric PNA (or PNA-amino acid chimaeras) with random or (partially) predefined sequences, useful for **screening** for cpds. with ability to bind to **proteins** and/or nucleic acids. Partic. the prods. are (1) **enzyme** inhibitors, partic. of phospholipase A2 for treating inflammatory disease (e.g. atopic dermatitis and bowel disease); (2) gene modulators; (3) diagnostic reagents (they hybridise specifically to nucleic acids involved in disease) and (4) primers and **probes** for studying **enzyme** biochemistry and **protein**/nucleic acid interaction.

ADVANTAGE - By using submonomer units in the synthesis, a non-regular backbone can be produced, providing greater diversity (e.g. Pro residues can be introduced to generate sec. structure). Some submonomers need be prepd. only once (in large quantity); they may be reactive enough to obviate need for coupling agents, and less complex nucleotide synthons are required. PNA have higher binding affinity for nucleic acid than the complementary nucleic acid.

Dwg.0/8

L27 ANSWER 28 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1995-074930 [10] WPIDS
DNC C1995-033297
TI Prepn. of arrays of similar cpds. for biological **screening** - using multi-component combinational synthesis in n-dimensional array, each having a position for each combination.
DC A96 B04 B05 J04
IN ARMSTRONG, R W
PA (REGC) UNIV CALIFORNIA; (ONTO-N) ONTOGEN CORP
CYC 54
PI WO 9502566 A1 19950126 (199510)* EN 91p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KG KP KR KZ LK LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN
AU 9473673 A 19950213 (199519)
EP 708751 A1 19960501 (199622) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
JP 09506857 W 19970708 (199737) 80p
ADT WO 9502566 A1 WO 1994-US8141 19940715; AU 9473673 A AU 1994-73673 19940715; EP 708751 A1 EP 1994-922629 19940715, WO 1994-US8141 19940715; JP 09506857 W WO 1994-US8141 19940715, JP 1995-504767 19940715
FDT AU 9473673 A Based on WO 9502566; EP 708751 A1 Based on WO 9502566; JP 09506857 W Based on WO 9502566
PRAI US 1994-180863 19940113; US 1993-92862 19930716
AB WO 9502566 A UPAB: 19970723
An array of cpds. having a common core structure (CCC) comprising the prods. of a multiple component combinatorial array synthesis (MCCA) having at least 3 components. The components of the MCCA comprise: (a) a 1st gp.

of reactants having a same 1st **functional gp.**; (b) a 2nd gp. of reactants having a same 2nd **functional gp.**; and (c) a 3rd gp. of reactants, having a same 3rd **functional gp.**; in which the **functional** gps. of (a), (b), and (c) react with each other to form the CCC. Also claimed are: (A) making a combinatorial array of cpds. having a CCC using an n component combinatorial array synthesis, where n corresponds to the no. of reaction components, n being at least 3, where each component comprises a gp. of reactants having the same **functional gp.**; the method comprises: (a) organising a series of reaction vessels in an n dimensional array where each reaction vessel is identifiable by its coordinates in the array, each axis corresp. to a different component and each position corresp. to a different reactant; (b) adding the reactants of the n components to the n dimensional array of reaction vessels so that the reactant is added to all of the reaction vessels corresp. to that reactant; and (c) reacting the contents to form the cpds. of the array; (B) creating a CA of cpds. with a CCC comprising: (a) identifying the desired core structure; (b) identifying a MCCA reaction capable of generating the core structure; (c) preparing an opt. combinatorial array of cpds. using the identified MCCA reaction as in (B); (C) conducting in vitro binding studies on a biological material comprising: (a) adding the biological material to an array of compounds, each cpd. in the array having a CCC and being bound to a solid support; and (b) measuring the binding of each cpd. to the biological material; and (D) a linker bound to a polymer, useful for binding cpds. in solid phase synthesis, and having a formula of type (I): (POLYMER)-NHCOCH2CH2CH(CH2CH2N3)COOH (I).

USE - The method allows generation of numerous organic cpds. to form an array or library to **probe** structure-activity relationships for the development of new therapeutic agents in a simple, rapid, and efficient manner. Many **biologically active** molecules possess one of a relatively small gp. of core structures, and by appropriate modification, a library, or sub-library, can be built up. Opt. automation techniques analogous to those used in nucleotide and peptide synthesis can be used, with the same reactant added to all the compartments in the same row, column or layer. A wide range of chemical reactions (including soln., solid phase, photochemical, electrochemical, free radical, or **enzymatic**) can be used in prepn. of the CCC. For solid state bound cpds., which can be freed from reactants and impurities more easily, it is possible, after cleavage to conduct in vitro bioassays directly e.g. by binding to biological material. Only a small amt. of material is required for a **screen**, making isolation and purificn. unnecessary in a first investigation.

ADVANTAGE - Much time and labour can be saved by the new approach. Rather than individual, usually linear, syntheses for each cpd., the method produces a CCC on a geometric scale as a prod. of the no. of reaction vessels, e.g. 5 x 5 x 5 gives 125 analogues. The MCCA technique should therefore accelerate new drug development and make research **screening** more widely available. **Screening** the cpds. is simultaneous, and cpds. are identified by their position in the matrix. Dwg.6/11

L27 ANSWER 29 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1989-278393 [38] WPIDS
DNN N1989-212563 DNC C1989-123269
TI New bis heterocyclic chelating agents - and lanthanide chelates for multi-label spectro-fluorometric assays.
DC B03 B04 J04 S03
IN KWIATKOWSK, M; MUKKALA, V
PA (WALL-N) WALLAC OY
CYC 12
PI WO 8908263 A 19890908 (198938)* EN 71p
RW: AT BE CH DE FR GB IT LU NL SE
W: JP US

ADT WO 8908263 A WO 1989-SE73 19890222
PRAI SE 1988-613 19880223
AB WO 8908263 A UPAB: 19951114
Chelating agents of formula (I) and their acid, ester, salt and chelate forms are new: A1-A6 = N or CR; n = 0-2; R = H or C-, O- and/or N-contg. gps. (same or different); Z and A1 = gps. contg. at least one heteroatom with a free pair of electrons, capable of chelating a metal ion together with the ring N atoms; B = a bridging gp. allowing (a) electron delocalisation between the two rings and (b) simultaneous coordination of the two ring N atoms with a chelated metal ion to form a 5- or 6-membered ring; X = an inert and stable bridging gp. with an aliphatic C atom separating Y from one of the rings; Y = a **functional gp** . or the residue of an organic cpd.; provided that for chelates of metals other than lanthanides, at least one R is other than H when n = O, Z = Z1 = N(CH2COO-)2 and all A1-A6 = CR.
USES - (I) may be used as **probes** or labels in homogeneous or heterogeneous immunoassays or nucleic acid hybrididdation assays, nuclei acid sequencing, fluorescence microscopy, cytometry and nuclei acid or **protein** finger printing.
0/0
Dwg.0/0

L27 ANSWER 30 OF 30 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1989-208565 [29] WPIDS
DNC C1989-092531
TI Methods appts. and compsns. for ligating **ligands** - by binding to common target to bring reactive gps. into reactive position, used esp. with polynucleotide **probes**.
DC A96 B02 B04 C03 D16
IN CRUICKSHAN, K A; MORRISON, L E; ROYER, G P; CRUICKSHANK, K A
PA (VYSI-N) VYSIS INC; (STAD) AMOCO CORP; (REGC) UNIV CALIFORNIA
CYC 15
PI EP 324616 A 19890719 (198929)* EN 29p
R: AT BE CH DE FR GB IT LI LU NL SE
AU 8928485 A 19890727 (198937)
JP 02005898 A 19900110 (199008)
US 5219734 A 19930615 (199325) 22p
EP 324616 B1 19950329 (199517) EN 34p
R: AT BE CH DE FR GB IT LI LU NL SE
DE 68921901 E 19950504 (199523)
US 5449602 A 19950912 (199542) 23p
CA 1339304 C 19970819 (199747)
US 5686243 A 19971111 (199751) 21p
JP 2858771 B2 19990217 (199912) 26p
US 6306587 B1 20011023 (200165)
ADT EP 324616 A EP 1989-300258 19890112; JP 02005898 A JP 1989-7525 19890113; US 5219734 A US 1988-143586 19880113; EP 324616 B1 EP 1989-300258 19890112; DE 68921901 E DE 1989-621901 19890112, EP 1989-300258 19890112; US 5449602 A US 1988-143586 19880113; CA 1339304 C CA 1988-586425 19881220; US 5686243 A Cont of US 1988-143586 19880113, US 1995-436117 19950508; JP 2858771 B2 JP 1989-7525 19890113; US 6306587 B1 Div ex US 1988-143586 19880113, Div ex US 1995-436117 19950508, US 1997-967011 19971110
FDT DE 68921901 E Based on EP 324616; US 5686243 A Cont of US 5449602; JP 2858771 B2 Previous Publ. JP 02005898; US 6306587 B1 Div ex US 5449602, Div ex US 5686243
PRAI US 1988-143586 19880113; US 1995-436117 19950508; US 1997-967011 19971110
AB EP 324616 A UPAB: 19930923
Compsn useful for forming dimers on photoactivation comprises a coumarin of formula (I) where R3, R5 = OH or OMe; and R1, R2, R4, R6 = H, reactive gp capable of reacting with aliphatic amines, a **ligand**, or antiligand. Compsn is claimed comprising a polynucleotide having at least

one photoreactive **functional gp** at or about the 3' or 5' termini, chosen from coumarins, psoralens, anthracenes, pyrenes, carotenes, tropones, chromones, quinones, maleic anhydride, alkyl maleimide, olefins, ketones, azides, polyolefins characterised by **conjugated** double bonds and ketone functionality and derivs. Polynucleotide is characterised by the 3' terminal of one strand bonded to the 5' terminal of a second strand through a dimer formed from reactive functional gps, pref photoreactive gps. Method for ligating **ligands** which bind to a common target comprises (a) contacting a target with a first **ligand** and a second **ligand**, where at least one of the **ligands** has a reactive **functional gp**. (A) capable of forming a covalent bond between the first and second **ligands** on activation when the **ligands** are placed in a reactive position, and the first and second **ligands** are capable of simultaneously binding to the target in a reactive position to form a target-first-second **ligand** complex; and (b) activating the reactive **functional gp** to form a covalent bond between the **ligands** while in reactive position.

USE/ADVANTAGE - Used in DNA and RNA hybridisation assays in diagnosis of physiological or pathological conditions or bacterial or viral infections in humans, animals or plants, and in detection of bacterial contamination of foodstuffs or identification of specific genes in bacterial cultures to detect eg antibiotic resistance.

0/1

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FILE COVERS 1907 - 18 Mar 2002  VOL 136 ISS 12
FILE LAST UPDATED: 15 Mar 2002  (20020315/ED)

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the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the
CAS Registry Numbers that were added to the CAS files between 12/27/01
and 1/23/02.  As of 1/23/02, the situation has been resolved.  Searches
and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry
Numbers with the P indicator executed between 12/27/01 and 1/23/02 may
be incomplete.  See the NEWS message on this topic for more information.
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     (FILE 'MEDLINE' ENTERED AT 11:09:22 ON 18 MAR 2002)
               DEL HIS Y

     FILE 'HCAPLUS' ENTERED AT 11:11:57 ON 18 MAR 2002
               E PROTEOME/CT
               E E3+ALL
L1          1523 S PROTEOM?
L2         66917 S PROBE#
L3         64397 S SCREEN?
L4        178337 S BIOACTIV? OR BIO? (L) ACTIVIT?
L5            25 S L1 AND L2
L6             5 S L5 AND (L3 OR L4)
L7          4092 S TARGET (L) (PROTEIN# OR ENZYME#)
L8           122 S L2 AND L7
L9        114290 S LIGAND#
L10           17 S L9 AND L8
L11         5236 S L7 OR TARGET (L)( MOL# OR MOLE?)
L12          122 S L11 AND  L8
L13          184 S L2 AND L11
L14           26 S L13 AND L9
L15           26 S L14 OR L10
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L16       18091 S FUNCTIONAL (3A) (GROUP# OR GRP# )
L17           9 S L16 AND L13
L18         861 S L2 (L) ACTIVIT?
L19           4 S L18 AND L1
L20           4 S L18 AND L11
L21          37 S L15 OR L17 OR L19 OR L20
L22          24 S L21 AND (L1 OR PROTEIN#)
L23          15 S L21 AND ENZYM?
L24          28 S L22 OR L23

     FILE 'HCAPLUS' ENTERED AT 11:21:01 ON 18 MAR 2002

=> d .ca 124 1-28

L24  ANSWER 1 OF 28  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:        2002:90063  HCAPLUS
DOCUMENT NUMBER:         136:163716
TITLE:                   Labeled peptides, proteins and antibodies
                         and processes and intermediates useful for their
                         preparation
INVENTOR(S):             Hahn, Klaus M.; Toutchkine, Alexei; Muthyala, Rajeev;
                         Kraynov, Vadim; Bark, Steven J.; Burton, Dennis R.;
                         Chamberlain, Chester
PATENT ASSIGNEE(S):      The Scripps Research Institute, USA
SOURCE:                  PCT Int. Appl., 158 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
     WO 2002008245      A2   20020131      WO 2001-US22194  20010713
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
             UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                  US 2000-218113   P  20000713
                                        WO 2000-US26821  W  20000929
                                        US 2001-279302   P  20010328
                                        US 2001-839577   A  20010420
OTHER SOURCE(S):         MARPAT 136:163716
AB   The invention provides peptide synthons having protected functional groups
     for attachment of desired moieties (e.g. functional mols. or probes).
     Also provided are peptide conjugates prepd. from such synthons, and
     synthon and conjugate prepn. methods including procedures for identifying
     optimum probe attachment sites.  Biosensors are provided having functional
     mols. that can locate and bind to specific biomols. within living cells.
     Biosensors can detect chem. and physiol. changes in those biomols. as
     living cells are moving, metabolizing and reacting to its environment.
     Methods are included for detecting GTP activation of a Rho GTPase protein
     using polypeptide biosensors.  When the biosensor binds GTP-activated Rho
     GTPase protein, an environmentally sensitive dye emits a signal of a
     different lifetime, intensity or wavelength than when not bound.  New
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fluorophores whose fluorescence responds to environmental changes are also provided that have improved detection and attachment properties, and that can be used in living cells, or in vitro.

IC ICM C07K001-00

CC 9-14 (Biochemical Methods)
Section cross-reference(s): 7, 15, 34, 41

ST labeled peptide **protein** antibody prepn; biosensor targeting biomol living cell **probe**; GTP activation Rho GTPase detection polypeptide biosensor; fluorophore fluorescence **probe** environmental change living cell

IT Animal cell line
(3T3; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Imaging
(FLAIR (fluorescent activation indicator for Rho **proteins**); labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Transcription factors
RL: PRP (Properties)
(GCN4, peptide tag derived from leucine zipper of; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Histocompatibility antigens
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(HLA-B27, fusion **proteins** with GFP; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Immunoglobulin receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(IgE type I; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Resins
RL: RCT (Reactant); RACT (Reactant or reagent)
(MBHA; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Histocompatibility antigens
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(MHC (major histocompatibility complex); labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Phycoerythrins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(P; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Phycoerythrins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(R-phycoerythrins, conjugates with peptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Imaging
(Rac activation in cells; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Wound healing

(Rac role in; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(WASP (Wiskott-Aldrich syndrome **protein**), polypeptide biosensor as peptide of, binding to cdc42; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Functional groups**
(aminooxy, peptide contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Neutrophil
(assay of cdc42 activity in cell lysates of stimulated; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Physics
(biophysics, **probes**; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(cellular, localization in living cells; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Allophycocyanins
Phycoerythrins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates with peptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Alexa
Drugs
(conjugates with polypeptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Antibodies
Peptides, biological studies
Polynucleotides
Proteins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cyan fluorescent **protein**, conjugates, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Fluorescent dyes
(cyanine, conjugates with peptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Gene
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(encoding fusion **proteins**; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(enhanced green fluorescent **protein**, conjugates, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(enhanced yellow green fluorescent **protein**, conjugates, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Resonant energy transfer
(fluorescence; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Cyanine dyes
(fluorescent, conjugates with peptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Fluorescent substances
(fluorophores, for detecting changes in responses of living cells to environment; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Immunoglobulins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fragments, conjugates; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Rho **protein** (G **protein**)
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fusion **proteins** with fluorescent **proteins**; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT G **proteins** (guanine nucleotide-binding **proteins**)
RL: ANT (Analyte); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(gene CDC42; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT G **proteins** (guanine nucleotide-binding **proteins**)
RL: ANT (Analyte); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(gene rac, polypeptide biosensor as p21-activated kinase peptide binding to; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU

(Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(green fluorescent, conjugates, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Nucleic acids
RL: ANT (Analyte); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(indicators for, conjugates with polypeptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Biosensors
Blood serum
Cell
Cell migration
Endoplasmic reticulum
Fibroblast
Fluorescence
Fluorescence excitation
Fluorescent dyes
Genetic vectors
Human
Phosphorescence
Phosphorescent substances
Signal transduction, biological
Stress, animal
Stress, microbial
Stress, plant
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Actins
Calmodulins
Myosins
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Peptides, biological studies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT DNA
Proteins
RNA
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Antibodies
Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Platelet-derived growth factors

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Nucleic acids
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(labeled; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Antibodies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Peptides, biological studies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Protein** motifs
(leucine zipper, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Fusion **proteins** (chimeric **proteins**)
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(of Rho GTPase **protein** and fluorescent **proteins**; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Affinity
(of peptide conjugate for **target**; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Rho **protein** (G **protein**)
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(p21rhoA; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Actins
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(polymn., Rac1 activation localization at site of; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Ligands**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(polypeptide-dye conjugates sensitive to binding by; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT pH
(polypeptide-dye conjugates sensitive to; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT ESR (electron spin resonance)
(**probes**, conjugates with polypeptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Protein** motifs
(**protein**-binding domain of p21-activated kinase 1, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Phosphorylation, biological
(**protein**; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(red fluorescent **protein**, conjugates, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Sensors
(responsive, conjugates with polypeptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Dyes
(sensitive to pH or **ligand** binding or other, conjugates with polypeptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Cage compounds
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(sensors, conjugates with polypeptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Dyes
(solvatochromic, conjugates with polypeptides; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT **Proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(yellow green fluorescent **protein**, conjugates, polypeptide biosensor contg.; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Actinins
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.alpha.-; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT Lactoglobulins
RL: RCT (Reactant); RACT (Reactant or reagent)
(.beta.-, labeling with tetramethylrhodamine N-hydroxysuccinimide ester; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 144713-51-9, Erk4 **protein** kinase

RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(Erk4 **protein** kinase; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 9059-32-9DP, GTPase, conjugates with fluorescent **proteins**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(GTP-activated Rho; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 394257-19-3P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(amino acid sequence of peptide tag derived from GCN4 leucine zipper; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 271795-11-0P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(amino acid sequence, C-terminal p21 binding domain peptide; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 393511-94-9P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(amino acid sequence, N-terminal p21 binding domain peptide; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 394257-16-0
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence, as tag in cellular **protein** localization; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 394257-20-6P
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(amino acid sequence, cloning and site-specific cysteine mutagenesis of; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 394257-21-7
RL: PRP (Properties)
(amino acid sequence; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 393512-08-8 393512-09-9 393512-10-2 393512-11-3
RL: PRP (Properties)
(as merocyanine dye; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 76-05-1, Trifluoroacetic acid, uses 5961-85-3, Tris(2-carboxyethyl)phosphine
RL: NUU (Other use, unclassified); USES (Uses)
(in eliminating multiply-labeled side products; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 50-01-1P, Guanidine hydrochloride
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(in improving yield of labeled product; labeled peptides,

proteins and antibodies and processes and intermediates useful for prepn.)

IT 9002-07-7, Trypsin 9004-07-3, .alpha.-Chymotrypsin
RL: NUU (Other use, unclassified); USES (Uses)
(labeled peptide cleavage with; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 137632-07-6, Erk1 kinase 144713-50-8, Erk3 **protein** kinase
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 137632-08-7, Erk2 kinase
RL: ANT (Analyte); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 394257-19-3DP, tetramethylrhodamine-labeled
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 65-61-2DP, Acridine Orange, conjugates with peptides 1239-45-8DP, Ethidium Bromide, conjugates with peptides 1325-87-7DP, Cascade Blue, conjugates with peptides 1461-15-0DP, Calcein, conjugates with peptides 2321-07-5DP, Fluorescein, conjugates with peptides 2768-89-0DP, Rhodamine X, conjugates with peptides 3520-42-1DP, Lissamine Rhodamine B, conjugates with peptides 7059-24-7DP, Chromomycin A3, conjugates with peptides 7240-37-1DP, 7-AAD, conjugates with peptides 10199-91-4DP, NBD, conjugates with peptides 18378-89-7DP, Mithramycin, conjugates with peptides 23491-45-4DP, Hoechst 33258, conjugates with peptides 23491-52-3DP, Hoechst 33342, conjugates with peptides 25535-16-4DP, Propidium Iodide, conjugates with peptides 30230-57-0DP, conjugates with peptides 41085-99-8DP, conjugates with peptides 43070-85-5DP, Hydroxycoumarin, conjugates with peptides 47165-04-8DP, DAPI, conjugates with peptides 51908-46-4DP, Dansyl aziridine, conjugates with peptides 70281-37-7DP, Tetramethylrhodamine, conjugates with peptides 76421-73-3DP, Monochlorobimane, conjugates with peptides 76433-29-9DP, LDS 751, conjugates with peptides 82354-19-6DP, Texas Red, conjugates with peptides 82446-52-4DP, Lucifer Yellow, conjugates with peptides 96314-96-4DP, Indo-1, conjugates with peptides 96314-98-6DP, Fura-2, conjugates with peptides 107091-89-4DP, Thiazole Orange, conjugates with peptides 107347-53-5DP, TRITC, conjugates with peptides 112117-57-4DP, conjugates with peptides 123632-39-3DP, Fluo-3, conjugates with peptides 126208-12-6DP, Carboxy-SNARF-1, conjugates with peptides 143245-02-7DP, conjugates with peptides 143413-84-7DP, TOTO-1, conjugates with peptides 143413-85-8DP, YOYO-1, conjugates with peptides 146368-15-2DP, Cy5, conjugates with peptides 146368-16-3DP, Cy3, conjugates with peptides 149838-22-2DP, FM 1-43, conjugates with peptides 153967-04-5DP, SNARF, conjugates with peptides 157199-59-2DP, TO-PRO-1, conjugates with peptides 157199-63-8DP, TO-PRO-3, conjugates with peptides 165599-63-3DP, BODIPY-FL, conjugates with peptides 166196-17-4DP, TOTO-3, conjugates with peptides 169799-14-8DP, Cy7, conjugates with peptides 194100-76-0DP, SYTOX Green, conjugates with peptides 204934-16-7DP, BODIPY TR, conjugates with peptides 237752-36-2DP, Red 613, conjugates with peptides 247145-11-5DP, Alexa-532, conjugates with peptides 287384-28-5DP, BODIPY TMR, conjugates with peptides 324767-53-5DP, SYTOX Orange, conjugates with peptides 396076-95-2DP,

TruRed, conjugates with peptides 396077-00-2DP, SYTOX Blue, conjugates with peptides
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 393511-95-0P
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 56-65-5, ATP, biological studies 86-01-1, GTP 22537-22-0, Magnesium ion, biological studies 142805-58-1, MEK kinase
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 393511-96-1DP, ditetramethylrhodamine-labeled 393511-97-2P
RL: BYP (Byproduct); PRP (Properties); PREP (Preparation)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 64-19-7, Acetic acid, uses 7440-66-6, Zinc, uses
RL: NUU (Other use, unclassified); USES (Uses)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 271795-07-4P 271795-10-9P 393511-92-7P 393511-93-8P 393511-96-1P 394257-17-1P 394656-50-9P 394656-72-5P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 393511-93-8DP, tetramethylrhodamine-labeled 394656-50-9DP, tetramethylrhodamine-labeled 394679-45-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 1080-74-6, 3-(Dicyanomethylene)indan-1-one 1127-35-1 4229-44-1, N-Methylhydroxylamine hydrochloride 5292-43-3 13139-15-6 17576-35-1, 1,3,3-Trimethoxy propene 27144-18-9 73259-81-1 246256-50-8 271795-14-3 393512-00-0 393512-07-7 393512-12-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 271795-03-0P 271795-04-1P 271795-05-2P 393511-98-3DP, resin-bound 393511-99-4DP, resin-bound 393512-01-1P 393512-04-4P 394257-18-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 393512-02-2P 393512-03-3P 393512-05-5P 393512-06-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)

IT 9059-32-9, GTPase
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(of Rho **protein**; labeled peptides, **proteins** and

antibodies and processes and intermediates useful for prepn.)
IT 70-18-8, Glutathione, miscellaneous
RL: MSC (Miscellaneous)
(peptide not; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)
IT 177893-51-5P, p21-Activated kinase
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polypeptide biosensor as peptide of, binding to Rac; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)
IT 142243-02-5, MAP kinase
RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(polypeptide biosensor; labeled peptides, **proteins** and antibodies and processes and intermediates useful for prepn.)
IT 394292-00-3 394292-01-4 394292-02-5 394292-03-6 394292-04-7
394292-05-8 394292-06-9 394292-07-0 394292-08-1
RL: PRP (Properties)
(unclaimed nucleotide sequence; labeled peptides, **proteins** and antibodies and processes and intermediates useful for their prepn.)
IT 394291-97-5 394291-98-6 394291-99-7
RL: PRP (Properties)
(unclaimed **protein** sequence; labeled peptides, **proteins** and antibodies and processes and intermediates useful for their prepn.)
IT 394211-44-0 394211-45-1
RL: PRP (Properties)
(unclaimed sequence; labeled peptides, **proteins** and antibodies and processes and intermediates useful for their prepn.)

L24 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:51669 HCAPLUS
DOCUMENT NUMBER: 136:80846
TITLE: Dipstick assays with a set of different **probes** to target double-stranded DNA in sample solution
INVENTOR(S): Lee, Helen; Dineva, Magda Anastassova; Hu, Hsiang Yun
PATENT ASSIGNEE(S): UK
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004671	A2	20020117	WO 2001-GB3039	20010706

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: GB 2000-16836 A 20000707

AB Improved dipstick assays for testing for the presence of a target nucleic acid in a sample soln. are described. A chromatog. dipstick is provided which comprises a contact end for contacting the sample soln. and a capture zone, remote from the contact end, for capturing target nucleic acid. Target nucleic acid in the sample soln. is captured at the capture zone and is detected by a set of labeled oligonucleotides each capable of hybridizing to a different region of the target nucleic acid or these capture probes interact with a hook capture probe bound to the target nucleic acid. The capture probe is coupled to a linker by reaction of a phosphoramidite group attached to the linker with a hydroxyl group of the probe or by reaction of a hydroxyl group of the linker with a phosphoramidite group attached to the probe. A capture probe spacer separates the linker from the capture probe and the present invention demonstrates that longer spacers increase the sensitivity of target nucleic acid detection. The capture probe spacer may be a protein like bovine serum albumin or thyroglobulin. The linker is coupled to the protein by reaction of a primary amino group attached to the linker with a carboxyl group of the protein. Alternatively, a nucleotide can also serve as a capture probe spacer or the capture probe can be coupled to the nucleotide spacer which is then coupled to a protein to space the capture probe from the protein. The non protein is preferably 6 nucleotides in length. Use of the spacer increases the stability of the interaction between the capture probe and the target nucleic acid and improves signal strength. In other methods a plurality of different capture probes are added to the sample soln. which can then be bound by a capture moiety at the capture zone to indirectly capture target nucleic acid. A detection probe capable of hybridizing to the target nucleic acid which can be releasably immobilized to a probe zone between the contact end and capture zone of the the dipstick is another embodiment of the invention. Also, the nucleic acid of interest could be coupled to a plurality of labels or ligands which can be bound by a ligand binding moiety to detect or capture the target nucleic acid when the probe has hybridized to the target nucleic acid. Using this method about 104 copies of Chlamydia trachomatis elementary bodies could be detected in less than an hour including the sample prepn. step. Although this assay has a sensitivity of detected about equal to other sandwich hybridization assays, it has the major advantages of speed and simplicity. Kits and dipsticks for carrying out such methods are also described.

IC ICM C12Q001-68
ICS B01L003-00

CC 3-1 (Biochemical Genetics)

ST dipstick assay detection capture target nucleotide sample soln; labeled oligonucleotide **probe** capture target nucleic acid; test kit dsDNA oligonucleotide **probe** multiple Chlamydia

IT Dyes
(antibody conjugate; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Thyroglobulin
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(as capture **probe** spacer in capture zone; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Linking agents
(branches, labels or **ligands** coupled to target nucleic acids using; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Antibodies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical

study); BIOL (Biological study); USES (Uses)
(conjugates, with dyes, as capture moiety of dipstick in capture zone; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Chlamydia trachomatis
(detection of, nucleic acids of; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Immunoassay
(dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Test kits
(dipsticks as, chromatog. strip; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT DNA
RL: ANT (Analyte); ANST (Analytical study)
(double-stranded; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Immunoglobulins
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, dye conjugates, as capture moiety of dipstick in capture zone; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(immobilized; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Glass beads
RL: DEV (Device component use); USES (Uses)
(label or detection **ligand** of capture **probe** are attached to; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Diagnosis
(**mol.**, of diseases using dipsticks; dipstick assays with set of different **probes** to **target** double-stranded DNA in sample soln.)

IT Membrane filters
(nitrocellulose, in capture zone, oligonucleotide attachment to; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Immobilization, **molecular**
(of oligonucleotides at **probe** zone or capture zone of dipstick; dipstick assays with set of different **probes** to **target** double-stranded DNA in sample soln.)

IT Nucleic acid hybridization
(sandwich assay; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT Albumins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(serum, bovine, as capture **probe** spacer in capture zone; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT 13507-42-1 73423-99-1 247934-65-2
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as capture **probe** spacer; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT 2321-07-5D, Fluorescein, oligonucleotide conjugates
RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(as reporter group; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT 133975-85-6
RL: ARU (Analytical role, unclassified); ANST (Analytical study) (capture **probe** linked to **protein** spacer using; dipstick assays with set of different **probes** to **target** double-stranded DNA in sample soln.)

IT 7440-57-5D, Gold, anti-biotin antibody conjugates
RL: ARU (Analytical role, unclassified); ANST (Analytical study) (colloidal; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT 58-85-5D, Biotin, nucleic-acid coupled
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

IT 9004-70-0, Nitrocellulose
RL: ARU (Analytical role, unclassified); ANST (Analytical study) (filter in capture zone, oligonucleotide attachment to; dipstick assays with set of different **probes** to target double-stranded DNA in sample soln.)

L24 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:868661 HCAPLUS
DOCUMENT NUMBER: 136:49292
TITLE: Detection of RNA targets using INVADER oligonucleotide-directed cleavage reactions and construction of modified Thermus polymerase enzymes with thermostable 5'-nuclease activities
INVENTOR(S): Allawi, Hatim; Bartholomay, Christian Tor; Chehak, Luanne; Curtis, Michelle L.; Eis, Peggy S.; Hall, Jeff G.; Ip, Hon S.; Kaiser, Michael; Kwiatkowski, Robert W., Jr.; Lukowiak, Andrew A.; Lyamichev, Victor; Ma, Wupo; Olson-munoz, Marilyn C.; Olson, Sarah M.; Schaefer, James J.; Skrzypczynski, Zbigniew; Takova, Tsetska Y.; Vedvik, Kevin L.; Lyamichev, Natalie E.; Neri, Bruce P.
PATENT ASSIGNEE(S): Third Wave Technologies, Inc., USA
SOURCE: PCT Int. Appl., 1266 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001090337	A2	20011129	WO 2001-US17086	20010524

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
US 2000-577304 A 20000524
US 2001-758282 A 20010111
US 2001-864426 A 20010524
US 2001-864636 A 20010524

AB The present invention provides novel cleavage agents and polymerases for the cleavage and modification of nucleic acid. The cleavage agents and polymerases find use, for example, for the detection and characterization of nucleic acid sequences and variations in nucleic acid sequences. In some embodiments, the 5'-nuclease activity of a variety of modified Thermus polymerase enzymes is used to cleave a target-dependent cleavage structure, thereby indicating the presence of specific nucleic acid sequences or specific variations thereof. The term "cleavage structure" refers to a structure that is formed by the interaction of at least one probe oligonucleotide (called the INVADER oligonucleotide) and a target nucleic acid, forming a structure comprising a duplex, the resulting structure being cleavable by a cleavage agent including but not limited to an enzyme. A sample suspected of contg. the target sequence is contacted with oligonucleotides capable of forming an invasive cleavage structure in the present of the target sequence and with an agent for detecting the presence of the invasive cleavage structure. ARRESTOR oligonucleotides improve sensitivity of multiple sequential invasive cleavage assays and allow use of higher concns. of primary probe without increasing background signal. The detailed description of the invention includes: (1) detection of specific nucleic acid sequences using 5'-nucleases in an INVADER-directed cleavage assay; (2) signal enhancement by incorporating the products of an invasive cleavage reaction into a subsequent invasive cleavage reaction; (3) effect of ARRESTOR oligonucleotides on signal and background in sequential invasive cleavage reactions; (4) improved enzymes for the use in INVADER oligonucleotide-directed cleavage reactions comprising RNA targets; (5) reaction design for INVADER assay detection of RNA targets; (6) kits for performing the RNA invader assay; and (7) the INVADER assay for direct detection and measurement of specific RNA analytes.

IC ICM C12N009-22
ICS C12N009-12; C12Q001-68

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 7

L24 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:781073 HCAPLUS
DOCUMENT NUMBER: 135:328100
TITLE: Detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase
INVENTOR(S): Faruqi, A. Fawad
PATENT ASSIGNEE(S): Molecular Staging, Inc., USA
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001079420	A2	20011025	WO 2001-US11947	20010412

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-547757 A 20000412

AB Disclosed are techniques for detection of nucleic acids, amplification of nucleic acids, or both, involving ligation by T4 RNA ligase of DNA strands hybridized to an RNA strand. These techniques are particularly useful for the detection of RNA sequences and for amplification of nucleic acids from, or dependent on, RNA sequences. It has been discovered that T4 RNA ligase can efficiently ligate DNA ends of nucleic acid strands hybridized to an RNA strand. In particular, this ligation is more efficient than the same ligation carried out with T4 DNA ligase. Thus, techniques involving ligation of DNA ends of nucleic acid strands hybridized to RNA can be performed more efficiently by using T4 RNA ligase. Many known ligation-based detection and amplification techniques are improved through the use of T4 RNA ligase acting on DNA strands or ends. Such techniques include ligase chain reaction (LCR), ligation combined with reverse transcription polymerase chain reaction (RT PCR), ligation-mediated polymerase chain reaction (LMPCR), polymerase chain reaction/ligation detection reaction (PCR/LDR), ligation-dependent polymerase chain reaction (LD-PCR), oligonucleotide ligation assay (OLA), ligation-during-amplification (LDA), ligation of padlock probes, open circle probes, and other circularizable probes, and iterative gap ligation (IGL).

IC ICM C12G

CC 3-1 (Biochemical Genetics)

ST RNA ligase target mediated DNA ligation; amplification RNA DNA **probe** ligation

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(DNA open circle or padlock; detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase)

IT Spheres
(beads, magnetic, coupled to **probe**; detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase)

IT Fluorescent indicators
Isotope indicators
Phosphorescent substances
(coupled to **probe**; detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase)

IT Antibodies
Enzymes, biological studies
Ligands
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(coupled to **probe**; detection and amplification of RNA using **target**-mediated ligation of DNA by RNA ligase)

IT DNA formation
(rolling-circle, by ligation of two **probes**; detection and amplification of RNA using target-mediated ligation of DNA by RNA ligase)

L24 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:763323 HCAPLUS

DOCUMENT NUMBER: 135:315598

TITLE: Methods for **proteomic** analysis using **activity** based **probes** for **target proteins**

INVENTOR(S): Cravatt, Benjamin F.; Sorensen, Erik; Patricelli, Matthew; Lovato, Martha; Adam, Gregory

PATENT ASSIGNEE(S): Scripps Research Institute, USA

SOURCE: PCT Int. Appl., 119 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077684	A2	20011018	WO 2000-US34187	20001215

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-195954 P 20000410
US 2000-212891 P 20000620
US 2000-222532 P 20000802

OTHER SOURCE(S): MARPAT 135:315598

AB The present invention provides methods for analyzing proteomes, as cells or lysates. The anal. is based on the use of probes that have specificity to the active form of proteins, particularly enzymes and receptors. The probes can be identified in different ways. In accordance with the present invention, a method is provided for generating and screening compd. libraries that are used for the identification of lead mols., and for the parallel identification of their biol. targets. By appending specific functionalities and/or groups to one or more binding moieties, the reactive functionalities gain binding affinity and specificity for particular proteins and classes of proteins. Such libraries of candidate compds., referred to herein as activity-based probes, or ABPs, are used to screen for one or more desired biol. activities or target proteins.

IC ICM G01N033-68
ICS G01N033-535; G06F019-00

CC 9-14 (Biochemical Methods)
Section cross-reference(s): 6, 7, 13

ST **proteome activity probe** synthesis library screening **protein enzyme** receptor

IT **Enzyme** functional sites
(active; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT Labels
(**activity**-based **probes**; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT Libraries
(chem.; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT **Functional groups**
(cycloalkyl; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT Mathematical methods
(dendrograms; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT Sulfonates
RL: PRP (Properties)
(diesters; methods for **proteomic** anal. using **activity**

based **probes** for **target proteins**)
IT Sulfonic acids, properties
RL: PRP (Properties)
(esters; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT Aryl groups
(hetero-; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT **Functional groups**
(heterocycle; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT Cell
(lysate fraction; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT **Enzymes**, properties
RL: PRP (Properties)
(metallo-; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT Acyl groups
Alkyl groups
Amide group
Aryl groups
Body fluid
Catalysis
Combinatorial library
Drug screening
Electromagnetism
Enzyme kinetics
Genetic methods
Phenotypes
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT **Enzymes**, analysis
RL: ANT (Analyte); CAT (Catalyst use); PRP (Properties); ANST (Analytical study); USES (Uses)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT **Proteins**, general, analysis
Proteome
Receptors
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT Aldehydes, properties
Amino acids, properties
Epoxides
Isotopes
Ketones, properties
Ligands
Nucleotides, properties
Oligomers
Oligonucleotides
Organic compounds, properties
Polyoxyalkylenes, properties
RL: PRP (Properties)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)
IT **Functional groups**

(phosphoryl **group**; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT Laser ionization mass spectrometry
(photodesorption, matrix-assisted; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT Laser desorption mass spectrometry
(photoionization, matrix-assisted; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT Denaturation
(**protein**, thermal; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT **Functional groups**
(pyridyl; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT **Enzymes**, analysis
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(redox; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT **Functional groups**
(sulfonyl **group**; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT **Functional groups**
(thyiophenyl; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT **Functional groups**
(.alpha.-halocarbonyl; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 38078-09-0, (Diethylamino)sulfur trifluoride
RL: RCT (Reactant)
(DAST; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 259270-28-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(FP-biotin; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 259270-29-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(FP-fluorescein; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 9028-86-8, Aldehyde dehydrogenase
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(cytosolic class I; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 9027-41-2, Hydrolase
RL: ANT (Analyte); CAT (Catalyst use); PRP (Properties); ANST (Analytical study); USES (Uses)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 342792-17-0P 342792-18-1P 342792-19-2P 342792-20-5P 342792-21-6P
342792-22-7P 342792-23-8P 342792-24-9P 342792-25-0P 342792-26-1P

342792-27-2P 367480-61-3P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 16156-52-8P 117800-97-2P 126092-21-5P
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 52-90-4, Cysteine, properties 56-84-8, L-Aspartic acid, properties 56-86-0, L-Glutamic acid, properties 58-85-5, Biotin 71-00-1, Histidine, properties 107-29-9D, .alpha.-halo derivs. 13537-32-1D, Fluorophosphoric acid, derivs.
RL: PRP (Properties)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 93-11-8, 2-Naphthalenesulfonyl chloride 98-09-9, Benzenesulfonyl chloride 98-59-9 98-68-0 98-74-8 111-87-5, 1-Octanol, reactions 112-43-6, 10-Undecen-1-ol 112-60-7 121-44-8, Triethylamine, reactions 122-52-1, Triethylphosphite 124-63-0, Methanesulfonyl chloride 2386-60-9, 1-Butanesulfonyl chloride 2857-97-8, Trimethylsilyl bromide 6066-82-6, N-Hydroxysuccinimide 7790-28-5 7795-95-1, 1-Octanesulfonyl chloride 10049-08-8, Ruthenium chloride (RuCl3) 16629-19-9, 2-Thiophenesulfonyl chloride 18704-37-5, 8-Quinolinesulfonyl chloride 66715-65-9, 2-Pyridylsulfonyl chloride 115416-38-1, 5-(Biotinamido)pentylamine
RL: RCT (Reactant)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 7766-49-6P 51148-67-5P 52355-50-7P 83637-49-4P 134179-40-1P 156125-40-5P 259270-26-3P 259270-27-4P 338964-01-5P 338964-02-6P 338964-03-7P 338964-04-8P 338964-05-9P 338964-06-0P 342792-15-8P 342792-16-9P 367478-49-7P 367478-57-7P 367478-66-8P 367478-71-5P 367478-76-0P 367478-80-6P 367478-84-0P 367478-88-4P 367478-96-4P 367479-00-3P 367479-05-8P 367479-14-9P 367479-19-4P 367479-24-1P 367479-27-4P 367479-31-0P 367479-35-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

IT 367944-46-5 367944-47-6 367944-49-8 367944-51-2 367944-54-5 368436-43-5 368436-44-6 368436-45-7 368436-46-8 368436-47-9
RL: PRP (Properties)
(unclaimed sequence; methods for **proteomic** anal. using **activity** based **probes** for **target proteins**)

L24 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:763309 HCAPLUS
DOCUMENT NUMBER: 135:315597
TITLE: Methods for bioactivity screening of candidate compounds using **activity** based **probes**
INVENTOR(S): Cravatt, Benjamin F.; Sorensen, Erik; Patricelli, Matthew; Lovato, Martha; Adam, Gregory
PATENT ASSIGNEE(S): Scripps Research Institute, USA
SOURCE: PCT Int. Appl., 118 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077668	A2	20011018	WO 2000-US34167	20001215

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-195954 P 20000410
US 2000-212891 P 20000620
US 2000-222532 P 20000802

OTHER SOURCE(S): MARPAT 135:315597

AB The present invention provides methods for analyzing proteomes, as cells or lysates. The anal. is based on the use of probes that have specificity to the active form of proteins, particularly enzymes and receptors. The probes can be identified in different ways. In accordance with the present invention, a method is provided for generating and screening compd. libraries that are used for the identification of lead mols., and for the parallel identification of their biol. targets. By appending specific functionalities and/or groups to one or more binding moieties, the reactive functionalities gain binding affinity and specificity for particular proteins and classes of proteins. Such libraries of candidate compds., referred to herein as activity-based probes, or ABPs, are used to screen for one or more desired biol. activities or target proteins.

IC ICM G01N033-10
ICS G01N033-535; G06F019-00

CC 9-14 (Biochemical Methods)
Section cross-reference(s): 1, 6, 7, 13, 14

ST **proteome activity probe** synthesis library screening **protein enzyme** receptor

IT **Enzyme** functional sites
(active; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT Labels
(**activity**-based **probes**; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT HPLC
(capillary; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT Combinatorial library
(chem.; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT Sulfonic acids, properties
RL: PRP (Properties)
(esters; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT Functional groups
(fluorophosphonyl; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT Ketones, properties
RL: PRP (Properties)
(halo; methods for bioactivity screening of candidate compds. using

activity based **probes**)
IT **Enzymes**, properties
RL: PRP (Properties)
(metallo-; methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT Capillary electrophoresis
Cell
Computer application
Computer program
Drug screening
Drugs
Electromagnetism
Immobilization, biochemical
Infection
Mass spectrometry
Phenotypes
Radiochemical analysis
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT Receptors
RL: ANT (Analyte); BPR (Biological process); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT **Enzymes**, analysis
RL: ANT (Analyte); CAT (Catalyst use); PRP (Properties); ANST (Analytical study); USES (Uses)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT **Proteins**, general, analysis
Proteome
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT Ligands
RL: BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT Epoxides
RL: PRP (Properties)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT Functional groups
(phosphoryl group, fluoro-; methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT Functional groups
(sulfonyl group; methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT 38078-09-0, (Diethylamino)sulfur trifluoride
RL: RCT (Reactant)
(DAST; methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT 259270-28-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(FP-biotin; methods for bioactivity screening of candidate compds. using **activity** based **probes**)
IT 259270-29-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(FP-fluorescein; methods for bioactivity screening of candidate compds.

using **activity** based **probes**)

IT 9028-86-8, Aldehyde dehydrogenase
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(cytosolic class I; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 9027-41-2, Hydrolase
RL: ANT (Analyte); CAT (Catalyst use); PRP (Properties); ANST (Analytical study); USES (Uses)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 342792-17-0P 342792-18-1P 342792-19-2P 342792-20-5P 342792-21-6P
342792-22-7P 342792-23-8P 342792-24-9P 342792-25-0P 342792-26-1P
342792-27-2P 367480-61-3P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 16156-52-8P 117800-97-2P 126092-21-5P
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 52-90-4, L-Cysteine, properties 56-45-1, L-Serine, properties 56-84-8, L-Aspartic acid, properties 56-86-0, L-Glutamic acid, properties 71-00-1, L-Histidine, properties 107-29-9D, .alpha.-halo derivs. 7723-14-0D, Phosphorus, fluoro derivs. 7782-41-4, Fluorine, properties 13537-32-1D, Fluorophosphoric acid, derivs.
RL: PRP (Properties)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 58-85-5, Biotin
RL: PRP (Properties); RCT (Reactant)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 93-11-8, 2-Naphthalenesulfonyl chloride 98-09-9, Benzenesulfonyl chloride 98-59-9 98-68-0 98-74-8 111-87-5, 1-Octanol, reactions 112-43-6, 10-Undecen-1-ol 112-60-7 121-44-8, Triethylamine, reactions 122-52-1, Triethylphosphite 124-63-0, Methanesulfonyl chloride 2386-60-9, 1-Butanesulfonyl chloride 2857-97-8, Trimethylsilyl bromide 6066-82-6, N-Hydroxysuccinimide 7681-82-5, Sodium iodide (NaI), reactions 7795-95-1, 1-Octanesulfonyl chloride 10049-08-8, Ruthenium chloride (RuCl3) 16629-19-9, 2-Thiophenesulfonyl chloride 18704-37-5, 8-Quinolinesulfonyl chloride 66715-65-9, 2-Pyridylsulfonyl chloride 115416-38-1, 5-(Biotinamido)pentylamine
RL: RCT (Reactant)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 7766-49-6P 51148-67-5P 52355-50-7P 83637-49-4P 134179-40-1P
156125-40-5P 259270-26-3P 259270-27-4P 338964-01-5P 338964-02-6P
338964-03-7P 338964-04-8P 338964-05-9P 338964-06-0P 342792-15-8P
342792-16-9P 367478-49-7P 367478-57-7P 367478-66-8P 367478-71-5P
367478-76-0P 367478-80-6P 367478-84-0P 367478-88-4P 367478-96-4P
367479-00-3P 367479-05-8P 367479-14-9P 367479-19-4P 367479-24-1P
367479-27-4P 367479-31-0P 367479-35-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(methods for bioactivity screening of candidate compds. using **activity** based **probes**)

IT 367944-46-5 367944-47-6 367944-48-7 367944-49-8 367944-50-1
367944-51-2 367944-53-4 367944-54-5 367944-55-6 367944-57-8
RL: PRP (Properties)

(unclaimed sequence; methods for bioactivity screening of candidate compds. using **activity** based **probes**)

L24 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:757545 HCAPLUS
DOCUMENT NUMBER: 136:66000
TITLE: Direct visualization of serine hydrolase **activities** in complex **proteomes** using fluorescent active site-directed **probes**
AUTHOR(S): Patricelli, Matthew P.; Giang, Dan K.; Stamp, Lisa M.; Burbaum, Jonathan J.
CORPORATE SOURCE: ActivX Biosciences, La Jolla, CA, 92037, USA
SOURCE: Proteomics (2001), 1(9), 1067-1071
Published in: Electrophoresis, 22(16)
CODEN: PROTC7; ISSN: 1615-9853
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The field of biochem. is currently faced with the enormous challenge of assigning functional significance to more than thirty thousand predicted protein products encoded by the human genome. In order to accomplish this daunting task, methods will be required that facilitate the global anal. of proteins in complex biol. systems. Recently, methods have been described for simultaneously monitoring the activity of multiple enzymes in crude proteomes based on their reactivity with tagged chem. probes. These activity based probes (ABPs) have used either radiochem. or biotin/avidin-based detection methods to allow consolidated visualization of numerous enzyme activities. Here we report the synthesis and evaluation of fluorescent activity based probes for the serine hydrolase super-family of enzymes. The fluorescent methods detailed herein provide superior throughput, sensitivity, and quant. accuracy when compared to previously described ABPs, and provide a straight-forward platform for high-throughput proteome anal.

CC 7-1 (Enzymes)
ST serine hydrolase detection **proteome** fluorescent probe; active site probe serine hydrolase **proteome**
IT Fluorometry
(direct visualization of serine hydrolase **activities** in complex **proteomes** using fluorescent active site-directed **probes**)
IT **Proteome**
RL: AMX (Analytical matrix); ANST (Analytical study)
(direct visualization of serine hydrolase **activities** in complex **proteomes** using fluorescent active site-directed **probes**)
IT 9015-88-7, D-Serine dehydrase 153301-19-0, Fatty acid amide hydrolase
RL: ANT (Analyte); ANST (Analytical study)
(direct visualization of serine hydrolase **activities** in complex **proteomes** using fluorescent active site-directed **probes**)
IT 383912-85-4P 383912-86-5P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(direct visualization of serine hydrolase **activities** in complex **proteomes** using fluorescent active site-directed **probes**)
IT 87328-05-0 338964-06-0 383912-87-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(direct visualization of serine hydrolase **activities** in complex **proteomes** using fluorescent active site-directed

probes)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:748054 HCAPLUS
DOCUMENT NUMBER: 135:299485
TITLE: Compositions and methods for detecting and quantifying gene expression in microarrays
INVENTOR(S): Lowe, David G.; Marsters, James C. Jr; Robbie, Edward P.; Smith, Victoria
PATENT ASSIGNEE(S): Genentech, Inc., USA
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001075166	A2	20011011	WO 2001-US10482	20010330

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-193767 P 20000331

AB Compns. and methods for improving detection sensitivity in nucleic acid microarray anal. are disclosed, including methods of purifying nucleic acids, methods of synthesizing fluorescent DNA probes, methods of hybridization, and methods of activating a substrate for target mol. attachment. The compns. and methods of this invention include synthesis of cDNA, sDNA, or cRNA probes from cellular RNA by in vitro transcription and/or a single-round of reverse transcription with incorporation of fluorochromes. Specific procedures for microarray slide prepn. to decrease background fluorescence are given. For example, silanization of glass slides with toluene as the solvent is preferred. In addn., unmodified polynucleotides can attach to a glass slide treated with 3-aminopropyltriethoxysilane followed by phenylene diisothiocyanate. Modified target DNA can also be synthesized using PCR primers which contain a primary amine and an alkyl linker attached to the 5'-end. The modified target DNA is then reacted with activated silanized glass slides. Microarray hybridization buffers contg. alkylammonium salts, dimethylsulfoxide and formamide and lacking the detergent sodium dodecyl sulfate also improved the detection sensitivity. The invention is illustrated with microarrays hybridized with fluorescent probes synthesized from very small quantities of RNA isolated from microdissected tumor cells, paraffin-embedded liver and colon tissue, fresh frozen liver tissue, and fresh frozen colon tissue. The microarray expts. were designed to compare tissue sample prepn. methods and gene expression in tumor vs. healthy tissues. An example of the sensitivity of these methods shows a microarray hybridized with sDNA probes from one round of amplification of 2 pg of RNA from an ovarian carcinoma cell line.

IC ICM C12Q001-68
CC 3-1 (Biochemical Genetics)

Section cross-reference(s): 9, 14, 21
ST DNA microarray technol sensitivity fluorescent **probe** hybridization target attachment; microarray substrate linker cRNA cDNA expression **probe** amplification diagnosis
IT Animal tissue
Body fluid
Cell
Ceramic composites
DNA microarray technology
Fluorescent **probes**
Gene dosage
Laser fluorometry
Nucleic acid hybridization
Printing (impact)
Printing (nonimpact)
UV and visible spectroscopy
(compns. and methods for detecting and quantifying gene expression in microarrays)
IT **Functional groups**
(hydroxysilyl, attached **target mol.** or linker; compns. and methods for detecting and quantifying gene expression in microarrays)
IT Antibodies
DNA
Ligands
Oligonucleotides
Peptide nucleic acids
Proteins, general, biological studies
RNA
Receptors
cDNA
mRNA
RL: ANT (Analyte); BUU (Biological use, unclassified); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(immobilized; compns. and methods for detecting and quantifying gene expression in microarrays)
IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled; compns. and methods for detecting and quantifying gene expression in microarrays)
IT Analytical apparatus
Microanalysis
(microarray, RNA, peptide nucleic acid, polypeptide, **protein**, antibody, receptor, or **ligand**; compns. and methods for detecting and quantifying gene expression in microarrays)
IT Nucleic acid amplification (method)
(sDNA and cRNA **probe** synthesis; compns. and methods for detecting and quantifying gene expression in microarrays)
IT 302-04-5, Thiocyanate, biological studies
RL: BUU (Biological use, unclassified); DEV (Device component use); RCT (Reactant); BIOL (Biological study); USES (Uses)
(**functional group**, linker reagent; compns. and methods for detecting and quantifying gene expression in microarrays)
IT 247144-99-6D, Alexa 488, conjugated with dUTP 247145-23-9D, Alexa 546, conjugated with dUTP
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(labeled **probe**; compns. and methods for detecting and quantifying gene expression in microarrays)

L24 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:709832 HCAPLUS
DOCUMENT NUMBER: 135:238953
TITLE: Method for identifying cell-specific target structures by immunolabeling
INVENTOR(S): Schubert, Walter
PATENT ASSIGNEE(S): Germany
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1136822	A2	20010926	EP 2001-106571	20010315
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 10014685	A1	20011031	DE 2000-10014685	20000324
US 2001039023	A1	20011108	US 2001-808224	20010314
JP 2001309799	A2	20011106	JP 2001-86054	20010323
CN 1334463	A	20020206	CN 2001-109720	20010323

PRIORITY APPLN. INFO.: DE 2000-10014685 A 20000324

AB In a procedure for identification of cell-specific target structures, reagent soln. Y1 (contg. at least one marker mol., e.g. a fluorescently labeled antibody) is automatically applied to object X1 (including cells and/or cell membranes from a cell or tissue sample). After reaction, automatic detection is used to recognize X1 labeled by Y1. Reagent Y1 is removed before or after detection of labeled material, and further reagent solns. Yn (n = 2, 3...n) may be applied for labeling; likewise, further objects of similar nature Xn (n = 2, 3...n) may be processed through these steps. At least one difference is detd. between the labeled forms of object X1 and object Xn. Identification is made of reagent soln. Y1 or Yn causing the difference in the previous step. Mols. of mol. complexes are then selected and characterized (esp. by protein sepn. techniques) in relation to binding to the reagents.

IC ICM G01N033-68
ICS G01N001-30

CC 9-10 (Biochemical Methods)

ST cell **target protein** identification immunolabeling

IT Animal tissue
Cell
Cell membrane
Fluorescent **probes**
Imaging
(method for identifying cell-specific target structures by immunolabeling)

IT **Proteins**, general, analysis
RL: ANT (Analyte); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(method for identifying cell-specific **target** structures by immunolabeling)

IT **Ligands**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for identifying cell-specific target structures by immunolabeling)

L24 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:661595 HCAPLUS
DOCUMENT NUMBER: 135:224727
TITLE: The g12L gene and **protein** associated with the control of metabolic activity and thermogenesis in brown adipose tissue
INVENTOR(S): Lewin, David A.; Adams, Sean H.
PATENT ASSIGNEE(S): Curagen Corp., USA; Genentech, Inc.
SOURCE: PCT Int. Appl., 105 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001064884	A2	20010907	WO 2001-US6839	20010302

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-186513 P 20000302

AB Disclosed herein are novel human and mouse nucleic acid sequences that encode polypeptides. Also disclosed are polypeptides encoded by these nucleic acid sequences, and antibodies that immunospecifically-bind to the polypeptide, as well as derivs., variants, mutants, or fragments of the aforementioned polypeptide, polynucleotide, or antibody. The invention further discloses therapeutic, diagnostic and research methods for diagnosis, treatment, and prevention of disorders involving any one of these novel nucleic acids and proteins. The protein was identified as similar to the rat Spot14 protein. The levels of the protein in mouse brown adipose tissue parallel those seen for Spot14 in rat brown adipose tissue. These criteria were used to screen for genes showing regulated expression in brown adipose tissue.

IC ICM C12N015-12
ICS C07K014-47; C12N005-10; C07K016-18; G01N033-53; C12Q001-68; A61K038-17
CC 13-6 (Mammalian Biochemistry)
Section cross-reference(s): 3
ST g12L **protein** cDNA human mouse cloning sequence; brown adipose tissue thermoregulation g12L **protein** gene discovery
IT Adipose tissue
(brown; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT Metabolism, animal
(disorder, g12L **protein** as **target** in treatment of; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT Nucleic acid hybridization
(for detection of g12L gene expression; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT **Probes** (nucleic acid)

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(for detection of g12L gene expression; g12L gene and **protein** assocd. with control of metabolic **activity** and thermogenesis in brown adipose tissue)

IT Drug screening
(for effectors of g12L **protein**; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Immunoassay
(for g12L **protein**; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Neoplasm
(g12L **protein** as marker for; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Cachexia
Diabetes mellitus
Obesity
(g12L **protein** as **target** in treatment of; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Gene, animal
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(g12L; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Genetic methods
(gene discovery, of g12L gene of human and mouse; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Mouse
(gene g12L of human and; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT **Proteins**, specific or class
RL: BPR (Biological process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(gene g12L; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Chromosome
(human X, g12L gene mapping to; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Antibodies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(humanized, to g12L **protein**; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Antibodies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal, to g12L **protein**; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Chromosome
(mouse X, DXMit86, g12L gene mapping to; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)

IT Genetic mapping
cDNA sequences
(of g12L gene of human and mouse; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT **Protein** motifs
(of g12L gene product; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT **Protein** sequences
(of g12L gene products of human and mouse; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT Antibodies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(to g12L **protein**; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT 326056-57-9, **Protein** g12L (mouse gene g12L) 358797-39-4, **Protein** g12L (human gene g12L)
RL: BPR (Biological process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(amino acid sequence; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT 358797-38-3 358797-40-7
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; g12L gene and **protein** assocd. with control of metabolic activity and thermogenesis in brown adipose tissue)
IT 170085-96-8 186513-34-8 186513-35-9
RL: PRP (Properties)
(unclaimed **protein** sequence; g12L gene and **protein** assocd. with the control of metabolic activity and thermogenesis in brown adipose tissue)

L24 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:630982 HCAPLUS
DOCUMENT NUMBER: 135:191238
TITLE: Diagnosis method using gene chip containing primers for genes of leukocyte differentiation antigens
INVENTOR(S): Yang, Mengsu; Miao, Jinming
PATENT ASSIGNEE(S): Hong Kong
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 22 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1284568	A	20010221	CN 1999-110796	19990813

AB The nucleotide sequences of probes targeted to 172 CD antigen genes for diagnosis are presented. The probes consist of fluorescent labeling substance at 5' end (not specified), C6 alkyl linker, and nucleotide sequence targeted to CD antigen genes. The gene chip is manufd. by synthesizing 20-60 bp DNA probes, spotting on Si sheet or glass sheet.

The detection process comprises isolating mRNA from samples, purifn., reverse-transcription to obtain cDNA, labeling, hybridizing with DNA chip, and detecting fluorescent intensity. The method is useful for diagnosing blood diseases and matching donor/acceptor in organ transplantation.

IC ICM C12Q001-68
ICS G01N033-50

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 15

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(4F2 antigen, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Complement receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(C5a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD100, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD101, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD103, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD104, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD105, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD107a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD107b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD114, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD114a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD114b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD115, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD116, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD117, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD121a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD123, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD124, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD126, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD127, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD130, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD132, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD134, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD135, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD138, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD140a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD140b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD141, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD142, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD143, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD144, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD147, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD148, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD151, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD153, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD155, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD157, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD161, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD162, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD163, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD164, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD166, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD1 (antigen)
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD1a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD1 (antigen)
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD1b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD1 (antigen)
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD1c, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD1d, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD1e, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD24, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD27, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD29a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD29b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD32b2, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD32b3, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD33, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD37, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD39, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD3d, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD3e, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD3g, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Glycoproteins, specific or class
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD40-L (antigen CD40 **ligand**), gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD41, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD42a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD42b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD42c, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD42d, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD44R, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD47, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD48, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD49a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD49f, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD52, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD53, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD6, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD63, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD66a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD66b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD66c, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD66d, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD66e, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD66f, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD70, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD72, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD73, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD79a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD79b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD83, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD87, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD89, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD8a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD8b1, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD8b2, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD8b3, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD9, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD90, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CD91, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT CD antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD94, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD96, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD97, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CD99, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw119, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw121b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw125, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw128a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw128b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw131, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw136, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(CDw137, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(CDw150, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Selectins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(E-, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Cell adhesion molecules
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ICAM-1 (intercellular adhesion mol. 1), gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Cell adhesion molecules
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ICAM-2 (intercellular adhesion mol. 2), gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Cell adhesion molecules
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ICAM-3 (intercellular adhesion mol. 3), gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Immunoglobulin receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(IgE type II, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Immunoglobulin receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(IgG type I, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Immunoglobulin receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(IgG type IIA, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Selectins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(L-, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Glycoproteins, specific or class
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(MCP (membrane cofactor **protein**), gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(MUC18, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Selectins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(P-, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Cell adhesion molecules
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(PECAM-1, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT **Proteins**, specific or class
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(TAPA-1 (**target** of antiproliferative antibody, 1), gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Cell adhesion molecules
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(VCAM-1, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(antigens CD11a, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(antigens CD11b, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(antigens CD11c, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Glycoproteins, specific or class
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(gene KAI1, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Antigens
Antigens
CD14 (antigen)
CD19 (antigen)
CD2 (antigen)
CD20 (antigen)
CD22 (antigen)
CD26 (antigen)
CD28 (antigen)
CD30 (antigen)
CD34 (antigen)
CD36 (antigen)
CD38 (antigen)
CD4 (antigen)
CD40 (antigen)
CD44 (antigen)
CD45 (antigen)
CD5 (antigen)
CD56 (antigen)
CD59 (antigen)
CD68 (antigen)
CD69 (antigen)

CD7 (antigen)
CD80 (antigen)
CD86 (antigen)
CTLA-4 (antigen)
Fas antigen
Invariant chain (class II antigen)
LFA-3 (antigen)
Leukosialin
Transferrin receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Primers (nucleic acid)
Probes (nucleic acid)
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(of CD antigen gene; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Tumor necrosis factor receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(p60, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Tumor necrosis factor receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(p80, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Glass, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**probe** immobilized to; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Complement receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(type 1, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Complement receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(type 2, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT TCR (T cell receptors)
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(.zeta., gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Interleukin 2 receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(.alpha.-chain, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(.alpha.v, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(.alpha.2, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (.alpha.3, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (.alpha.4, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (.alpha.5, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Interleukin 2 receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (.beta.-chain, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (.beta.2, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT Integrins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (.beta.3, gene chip **probes** for the gene of; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

IT 7440-21-3, Silicon, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study) (**probe** immobilized to; diagnosis method using gene chip contg. primers for genes of leukocyte differentiation antigens)

L24 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:397084 HCAPLUS
DOCUMENT NUMBER: 135:15064
TITLE: Oligonucleotides and assemblies thereof and method for detection of target nucleic acid sequences
INVENTOR(S): Alajem, Sara; Reinhartz, Avraham; Waksman, Michal
PATENT ASSIGNEE(S): Gamida Sense Diagnostics Ltd., Israel
SOURCE: PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001038570	A1	20010531	WO 2000-IL798	20001129

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,

YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 1999-449545 A 19991129

AB An oligonucleotide or assembly of oligonucleotides for the detection of the presence or absence of a target nucleic acid in a sample. The assembly of oligonucleotides comprises four regions, a first and second regions which hybridize to the target nucleic acid sequence and a third and fourth region where the third region is linked to the first region and the second region is linked to the fourth region. The third and fourth regions hybridize to one another. This hybridized structure can be cleaved with a restriction enzyme, which cleavage will indicate hybridization of the oligonucleotide or oligonucleotides to the target. The invention also comprises methods of using these oligonucleotides.

IC ICM C12Q001-68
ICS C12Q001-70; C12P019-34; C07H021-02; C07H021-04

CC 3-1 (Biochemical Genetics)

IT Avidins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(conjugates with oligonucleotide **probes**; oligonucleotides and assemblies thereof and method for detection of target nucleic acid sequences)

IT Oligonucleotides
Probes (nucleic acid)
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(double-strand-, restriction site-forming, fluorophore-labeled; oligonucleotides and assemblies thereof and method for detection of target nucleic acid sequences)

IT Chelating agents
Epitopes
Fluorescent substances
Ions
(oligonucleotide **probes** labeled with; oligonucleotides and assemblies thereof and method for detection of target nucleic acid sequences)

IT Antibodies
Antigens
Enzymes, biological studies
Ligands
Radionuclides, biological studies
Receptors
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(oligonucleotide **probes** labeled with; oligonucleotides and assemblies thereof and method for detection of **target** nucleic acid sequences)

IT 58-85-5D, Biotin, conjugates with oligonucleotide **probes**
6268-49-1D, conjugates with oligonucleotide **probes** 9013-20-1D, Streptavidin, conjugates with oligonucleotide **probes**
50402-56-7D, EDANS, conjugates with oligonucleotide **probes**
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(oligonucleotides and assemblies thereof and method for detection of

target nucleic acid sequences)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:247291 HCAPLUS
DOCUMENT NUMBER: 134:261221
TITLE: Methods for creating a compound library and identifying lead chemical templates and **ligands** for **target molecules**
INVENTOR(S): Stockman, Brian J.; Farley, Kathleen
PATENT ASSIGNEE(S): Pharmacia & Upjohn Company, USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001023330	A2	20010405	WO 2000-US41034	20000929

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-156818 P 19990929
US 1999-161682 P 19991026
US 2000-192685 P 20000328

AB A method for developing a library of compds., the compd. library, a method for identifying ligands for target mols., and a method for identifying lead chem. templates, which, for example, can be used in drug discovery and design, are provided. Certain embodiments of these methods include the use of NMR spectroscopy.

IC ICM C07B061-00
ICS G01N033-53; G01R033-46
CC 1-1 (Pharmacology)
ST drug design library **ligand** identification NMR
IT Desulfovibrio vulgaris
(flavodoxin; methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)
IT Antibacterial agents
Antiviral agents
Combinatorial library
Drug design
Drug screening
Flow injection systems
Microtiter plates
Molecular association
NMR spectroscopy
Proton NMR spectroscopy
(methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)
IT Flavodoxin

Ligands
Proteins, general, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT Holders
(multiwell sample holder; methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT NMR spectroscopy
(nitrogen-15; methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT NMR spectroscopy
(two-dimensional; methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT Overhauser effect
(water-**ligand**; methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT NMR spectrometers
(with flow-injection **probe**; methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT 7789-20-0, Water-d2
RL: MSC (Miscellaneous)
(methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT 120-72-9D, Indole, derivs.
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT 90-52-8 21404-88-6 144477-54-3
RL: PRP (Properties)
(methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

IT 7732-18-5, Water, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(water-**ligand** NOE; methods for creating compd. library and identifying lead chem. templates and **ligands** for **target mols**.)

L24 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:175793 HCAPLUS
DOCUMENT NUMBER: 135:16295
TITLE: Profiling the specific reactivity of the **proteome** with non-directed **activity**-based **probes**
AUTHOR(S): Adam, Gregory C.; Cravatt, Benjamin F.; Sorensen, Erik J.
CORPORATE SOURCE: The Skaggs Institute for Chemical Biology and Department of Chemistry, The Scripps Research Institute, La Jolla, CA, 92037, USA
SOURCE: Chemistry & Biology (2001), 8(1), 81-95
CODEN: CBOLE2; ISSN: 1074-5521
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Background: The field of proteomics aims to characterize dynamics in

protein function on a global level. However, several classes of proteins, in particular low abundance proteins, remain difficult to characterize using std. proteomics technologies. Recently, chem. strategies have emerged that profile classes of proteins based on activity rather than quantity, thereby greatly facilitating the anal. of low abundance constituents of the proteome. Results: In order to expand the classes of proteins susceptible to anal. by activity-based methods, we have synthesized a library of biotinylated sulfonate esters and applied its members to complex proteomes under conditions that distinguish patterns of specific protein reactivity. Individual sulfonates exhibited unique profiles of proteome reactivity that in extreme cases appeared nearly orthogonal to one another. A robustly labeled protein was identified as a class I aldehyde dehydrogenase and shown to be irreversibly inhibited by members of the sulfonate library. Conclusions: Through screening the proteome with a nondirected library of chem. probes, diverse patterns of protein reactivity were uncovered. These probes labeled protein targets based on properties other than abundance, circumventing one of the major challenges facing contemporary proteomics research. Considering further that the probes were found to inhibit a target enzyme's catalytic activity, the methods described herein should facilitate the identification of compds. possessing both selective proteome reactivities and novel bioactivities.

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 6, 7, 13

ST **protein activity** based **probe** biotinylated sulfonate ester aldehyde dehydrogenase; **proteome activity** based **probe** biotinylated sulfonate ester aldehyde dehydrogenase

IT Labels
(**activity**-based **probes**; profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT **Protein** sequences
(aldehyde dehydrogenase; profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(labeled; profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT **Enzyme** kinetics
Testis
(profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT **Enzymes**, analysis
Proteins, general, analysis
Proteome
RL: ANT (Analyte); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT 9028-86-8P, Aldehyde dehydrogenase
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process)

(class I; profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT 16156-52-8P 117800-97-2P 126092-21-5P 342792-17-0P 342792-18-1P
342792-19-2P 342792-20-5P 342792-21-6P 342792-22-7P 342792-23-8P
342792-24-9P 342792-25-0P 342792-26-1P 342792-27-2P
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT 64-17-5, Ethanol, reactions 111-87-5, 1-Octanol, reactions 112-43-6, 10-Undecen-1-ol 124-63-0, Methanesulfonyl chloride 66715-65-9, 2-Pyridylsulfonyl chloride 115416-38-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

IT 342792-15-8P 342792-16-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(profiling specific reactivity of **proteome** with non-directed **activity**-based **probes**)

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:101352 HCAPLUS
DOCUMENT NUMBER: 134:158458
TITLE: **Probes** for detecting nucleic acid target sequences involving in vitro transcription from an RNA polymerase promoter
INVENTOR(S): Lloyd, John Scott; Weston, Anthony; Cardy, Donald Leonard Nicholas; Marsh, Peter
PATENT ASSIGNEE(S): Cytocell Limited, UK
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001009376	A1	20010208	WO 2000-GB2946	20000731

W: AU, CA, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: GB 1999-17816 A 19990729

AB Disclosed is a probe mol. comprising single stranded nucleic acid; said probe comprising a single stranded sequence complementary to a target nucleic acid sequence; a single strand of an RNA polymerase promoter sequence; and a blocking moiety adjacent or substantially adjacent to the promoter sequence, a method of detecting a nucleic acid sequence of interest using the probe; and kits comprising the probe.

IC ICM C12Q001-68
CC 3-1 (Biochemical Genetics)
ST nucleic acid **probe** oligonucleotide RNA polymerase promoter transcription
IT **Functional groups**

(C2-C20 or C3-C10 alkyl, alkanol or alkylene, blocking moiety comprising; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT **Enzymes**, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(as marker; method for detecting nucleic acid **target** sequences involving in vitro transcription from RNA polymerase promoter)

IT Test kits
(comprising **probes** of this invention; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT Oligonucleotides
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(labeled, as **probe** to RNA polymerase promoter; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT Nucleic acids
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(locked, LNA, **probe** comprising; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT Peptide nucleic acids
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(**probe** comprising; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT DNA
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(single-stranded, **probe** comprising; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(to RNA polymerase promoter; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT 325177-26-2
RL: PRP (Properties)
(Unclaimed; **probes** for detecting nucleic acid target sequences involving in vitro transcription from an RNA polymerase promoter)

IT 9012-90-2, DNa polymerase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(for extending **probe** 3'-end; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT 2615-15-8, Hexaethylene glycol 26264-14-2, Propanediol 26762-67-4, Octanediol
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**probe** comprising; method for detecting nucleic acid target sequences involving in vitro transcription from RNA polymerase promoter)

IT 324589-37-9 324589-38-0 324589-41-5 324589-42-6 325177-18-2, 1: PN: WO0109376 SEQID: 1 unclaimed DNA 325177-19-3, 2: PN: WO0109376 SEQID: 2 unclaimed DNA 325177-20-6, 3: PN: WO0109376 SEQID: 3 unclaimed DNA 325177-21-7, 4: PN: WO0109376 SEQID: 4 unclaimed DNA 325177-22-8, 5: PN: WO0109376 SEQID: 5 unclaimed DNA 325177-23-9, 8: PN: WO0109376 SEQID: 8 unclaimed DNA 325177-24-0, 9: PN: WO0109376 SEQID: 9 unclaimed DNA 325177-25-1 325177-27-3 325177-28-4 325177-29-5 325177-30-8 325177-31-9 325177-32-0 325177-33-1 325177-34-2 325177-35-3 325177-36-4 325177-37-5 325177-38-6 325177-39-7
RL: PRP (Properties)
(unclaimed nucleotide sequence; **probes** for detecting nucleic acid target sequences involving in vitro transcription from an RNA polymerase promoter)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:814669 HCAPLUS
DOCUMENT NUMBER: 133:346790
TITLE: Multiple tag analysis
INVENTOR(S): Lizardi, Paul M.; Latimer, Darin R.
PATENT ASSIGNEE(S): Yale University, USA
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000068434	A2	20001116	WO 2000-US12391	20000505
WO 2000068434	A3	20020131		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-132969 P 19990507

AB Disclosed is a method of detecting multiple analytes in a sample in a single assay. The method is based on encoding target mols. with signals followed by decoding of the encoded signal. This encoding/decoding uncouples the detection of a target mol. from the chem. and phys. properties of the target mol. In basic form, the disclosed method involves assocn. of one or more reporter mols. with one or more target samples, assocn. of one or more decoding tags with the reporter mols., and detection of the decoding tags. The reporter mols. assoc. with target mols. in the target sample(s). Generally, the reporter mols. correspond to one or more target mols., and the decoding tags correspond to one or more reporter mols. Thus, detection of particular decoding tags indicates the presence of the corresponding reporter mols. In turn, the presence of particular reporter mols. indicates the presence of the corresponding target mols. The sensitivity of the disclosed method can also be enhanced by including a signal amplification step prior to detection. Medical applications of this method include the anal. of the phenotypic status or replicative status of cells (growth or quiescence) and the assessment of

normal and neoplastic cells in histol. or cytol. specimens in normal and disease states. For example, a pathologist may use the method to link a phenotypic state with the protein profile of lesion believed to contain malignant or pre-malignant cells.

IC ICM C12Q001-68

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 3

IT **Proteins**, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DNA-binding; multiple tag anal.)

IT **Protein** motifs
(Helix-turn-helix; multiple tag anal.)

IT **Proteins**, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(cell surface; multiple tag anal.)

IT **Protein** motifs
(leucine zipper; multiple tag anal.)

IT **Proteins**, specific or class
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**ligand**-binding; multiple tag anal.)

IT ADP ribosylation
Adhesion, physical
Alkylation
Animal tissue
Bond cleavage
Cell
Cell division
Cell proliferation
Chromatography
Conformation
DNA sequences
Dimerization
Disease, animal
ESR spectroscopy
Electrophoresis
Fluorescent **probes**
Fluorometry
Fragmentation reaction
Glycosylation
HPLC
Immobilization, biochemical
Interface
Luminescence spectroscopy
Mass
Mass spectrometry
Methylation
Microwave
Molecular association
NMR spectroscopy
Neoplasm
Nucleic acid hybridization
Phenotypes
Phosphorimetry
Phosphorylation
Plates
Protein motifs
Ribosylation
SERS (Raman scattering)
Synthesis
(multiple tag anal.)

IT Carbohydrates, analysis
DNA
Peptides, analysis
Prion **proteins**
Receptors
RL: ANT (Analyte); ANST (Analytical study)
(multiple tag anal.)
IT Antibodies
Haptens
Ligands
Nucleic acid bases
Oligonucleotides
Peptide nucleic acids
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(multiple tag anal.)
IT **Proteins**, general, reactions
RL: PRP (Properties); RCT (Reactant)
(multiple tag anal.)
IT Conformation
(**protein**; multiple tag anal.)
IT **Molecules**
(**target**; multiple tag anal.)
IT **Protein** motifs
(zinc finger; multiple tag anal.)

L24 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:756609 HCAPLUS
DOCUMENT NUMBER: 133:293180
TITLE: The use of microfluidic systems in the electrochemical detection of target analytes
INVENTOR(S): Kayyem, Jon Faiz
PATENT ASSIGNEE(S): Clinical Micro Sensors, Inc., USA
SOURCE: PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000062931	A1	20001026	WO 2000-US10903	20000421
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1183102	A1	20020306	EP 2000-923580	20000421
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1999-295691 A 19990421
WO 2000-US10903 W 20000421

AB The microfluidic system can comprise a solid support that has a sample inlet port, a first microchannel, a storage module (e.g., for assay reagents) and a second microchannel. The second microchannel may be in fluid contact directly with the detection module comprising a detection

electrode, or a self-assembled monolayer and a binding ligand. The device can contain a sample handling well and a second storage well with a microchannel leading to the sample handling well. The sample handling well could be a cell lysis chamber and the storage well could contain lysis reagents. The device can contain a sample handling well that is a cell capture or enrichment chamber, with an addnl. reagent storage well for elution buffer. The device may contain a reaction module with a storage module, e.g., for storage of amplification reagents. An optional waste module can be connected to the reaction module via a microchannel. The device may contain addnl. separators, valves, waste wells, and pumps, including addnl. electrodes. The microfluidic systems may be used for amplification and detection of nucleic acids, proteins or other biochem. analytes in biol. samples or cells.

IC ICM B01L003-00
ICS C12Q001-68; G01N033-543

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 14, 76

ST microfluidic system electrochem detection **target** analyte; nucleic acid electrochem detection microfluidic system; **protein** electrochem detection microfluidic system; diagnosis microfluidic system electrochem detection; lab chip electrochem detection **target** analyte

IT DNA
Nucleic acids
Oligonucleotides
Peptide nucleic acids
Proteins, general, analysis
RNA
mRNA
rRNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(microfluidic systems for electrochem. detection of **target** analytes)

IT **Ligands**
RL: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)
(microfluidic systems for electrochem. detection of target analytes)

IT **Probes** (nucleic acid)
RL: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)
(microfluidic systems for electrochem. detection of target analytes)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:699119 HCAPLUS
DOCUMENT NUMBER: 133:249316
TITLE: Monolayer and electrode for detecting a label-bearing target and method of use thereof
INVENTOR(S): Eckhardt, Allen E.; Mikulecky, Jill C.; Napier, Mary E.; Thomas, Robert S.; Thorp, H. Holden
PATENT ASSIGNEE(S): The University of North Carolina At Chapel Hill, USA; Xanthon, Inc.
SOURCE: U.S., 21 pp., Cont.-in-part of U.S. Ser. No. 179,665. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6127127	A	20001003	US 1999-296929	19990422
US 5871918	A	19990216	US 1996-667338	19960620
US 5968745	A	19991019	US 1997-950503	19971014
US 6132971	A	20001017	US 1998-179665	19981027
WO 2000065099	A1	20001102	WO 2000-US2976	20000204

W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1185692	A1	20020313	EP 2000-913366	20000204

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.:

US 1995-495817	B2	19950627
US 1996-667338	A3	19960620
US 1997-950503	A2	19971014
US 1998-179665	A2	19981027
US 1995-60949P	P	19950627
US 1996-16265P	P	19960419
US 1999-296929	A	19990422
WO 2000-US2976	W	20000204

AB An electrode for detecting interactions between members of a binding pair, which electrode has been modified by formation of a non-conductive self-assembled monolayer, and a method of detecting biomols., such as nucleic acids or other targets, including receptors, ligands, antigens or antibodies, utilizing such an electrode. When contacted with a target nucleic acid, an oligonucleotide probe coupled to the self-assembled monolayer reacts with the target nucleic acid to form a hybridized nucleic acid on the modified electrode surface. The hybridized nucleic acid is reacted with a transition metal complex capable of oxidizing a preselected base in the hybridized nucleic acid in an oxidn.-redn. reaction, the oxidn.-redn. reaction is detected, and the presence or absence of the nucleic acid is detd. from the detected oxidn.-redn. reaction.

IC ICM C12Q001-68
ICS C12M001-00; C07F009-22

NCL 435006000

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 15

IT Animal tissue culture
Biochemical **molecules**
Coupling agents
Diagnosis
Electrodes
Environmental analysis
Food analysis
Immobilization, biochemical
Monolayers
NASBA (nucleic acid sequence-based amplification)
Nucleic acid hybridization
Oxidation
PCR (polymerase chain reaction)
Redox reaction
Self-assembled monolayers

Surgery
Tooth
Veterinary medicine
(monolayer and electrode for detecting a label-bearing **target** and method of use thereof)

IT Antibodies
Antigens
Carbohydrates, analysis
Ligands
Nucleic acids
Proteins, general, analysis
Receptors
RL: ANT (Analyte); ANST (Analytical study)
(monolayer and electrode for detecting a label-bearing **target** and method of use thereof)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(monolayer and electrode for detecting a label-bearing target and method of use thereof)

IT **Functional groups**
(phosphonate **group**; monolayer and electrode for detecting a label-bearing target and method of use thereof)

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:795994 HCAPLUS
DOCUMENT NUMBER: 132:31744
TITLE: Gene **probes** used for genetic profiling in healthcare screening and planning
INVENTOR(S): Roberts, Gareth Wyn
PATENT ASSIGNEE(S): Genostic Pharma Ltd., UK
SOURCE: PCT Int. Appl., 745 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964627	A2	19991216	WO 1999-GB1780	19990604

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:		
GB 1998-12099	A	19980606
GB 1998-13291	A	19980620
GB 1998-13611	A	19980624
GB 1998-13835	A	19980627
GB 1998-14110	A	19980701
GB 1998-14580	A	19980707
GB 1998-15438	A	19980716
GB 1998-15574	A	19980718

GB 1998-15576	A	19980718
GB 1998-16085	A	19980724
GB 1998-16086	A	19980724
GB 1998-16921	A	19980805
GB 1998-17097	A	19980807
GB 1998-17200	A	19980808
GB 1998-17632	A	19980814
GB 1998-17943	A	19980819

AB There is considerable evidence that significant factor underlying the individual variability in response to disease, therapy and prognosis lies in a person's genetic make-up. There have been numerous examples relating that polymorphisms within a given gene can alter the functionality of the protein encoded by that gene thus leading to a variable physiol. response. In order to bring about the integration of genomics into medical practice and enable design and building of a technol. platform which will enable the everyday practice of mol. medicine a way must be invented for the DNA sequence data to be aligned with the identification of genes central to the induction, development, progression and outcome of disease or physiol. states of interest. According to the invention, the no. of genes and their configurations (mutations and polymorphisms) needed to be identified in order to provide crit. clin. information concerning individual prognosis is considerably less than the 100,000 thought to comprise the human genome. The identification of the identity of the core group of genes enables the invention of a design for genetic profiling technologies which comprises of the identification of the core group of genes and their sequence variants required to provide a broad base of clin. prognostic information - "genostics". The "Genostic.RTM." profiling of patients and persons will radically enhance the ability of clinicians, healthcare professionals and other parties to plan and manage healthcare provision and the targeting of appropriate healthcare resources to those deemed most in need. The use of this invention could also lead to a host of new applications for such profiling technologies, such as identification of persons with particular work or environment related risk, selection of applicants for employment, training or specific opportunities or for the enhancing of the planning and organization of health services, education services and social services.

IC ICM C12Q001-68
ICS C07K016-18

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9, 13, 14

ST **probe** genetic profiling healthcare screening

IT Ankyrins
Calmodulins
Notch (receptor)
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**1** and **2** and 3, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT **Angiotensin** receptors
Fibrillins
Neurofibromin
Presenilins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1 and **2**, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT **Inositol** 1,4,5-trisphosphate receptors
P-glycoproteins

Uncoupling protein
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1 and 3, core group of disease-**related** genes; gene **probes used** for genetic profiling in healthcare screening and planning)

IT **Chloride** channel
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1 and 5 and KB, core group of disease-related genes; **gene probes** used for genetic profiling in healthcare screening and planning)

IT **Calbindins**
Keratins
Laminin receptors
Synaptobrevins
Syntaxins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**1**, core group of disease-related genes; gene **probes used for genetic** profiling **in** healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**10**, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**11** and 2 and 3 and 9, core group of disease-**related** genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Interleukin **receptors**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(12, core group of disease-related genes; gene **probes** used for genetic **profiling** in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**13**, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**14**, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Myosins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(15 and 5A and 6 and 7A and cardiac, **core** group of disease-related genes; gene probes used for genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(15, core group of disease-related genes; gene **probes** **used** for genetic profiling in healthcare screening and planning)

IT **Keratins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(16, core group of disease-related genes; gene **probes** used for genetic **profiling** in healthcare screening and planning)

IT **Keratins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(17, core group of disease-related genes; gene **probes** used for genetic profiling **in** healthcare screening and planning)

IT **Antigens**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(17-1A, core group of disease-related genes; gene **probes** used for genetic profiling **in** healthcare screening and planning)

IT **Keratins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(18, core group of disease-related genes; **gene probes** used for genetic profiling in healthcare screening **and** planning)

IT **Melatonin** receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1A and 1B, core group of disease-related genes; gene **probes** **used** for genetic profiling in healthcare screening and planning)

IT **Tropomyosins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1.alpha. and 3, core group of disease-related genes; gene **probes** used for **genetic** profiling in healthcare screening and planning)

IT Calculi, **renal**
(2, core group **of** disease-related genes; gene probes used for genetic profiling **in** healthcare screening and planning)

IT Bone morphogenetic **proteins**
Synaptobrevins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(2, core group of disease-related genes; gene **probes** **used** for genetic **profiling** in healthcare screening and planning)

IT Bone morphogenetic **proteins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(2B, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Cyclin dependent kinase inhibitors
(3, core group of disease-related genes; **gene probes** used for genetic profiling in healthcare screening and planning)

IT Transcription factors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(3, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Keratins

planning)

L24 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:795993 HCAPLUS
DOCUMENT NUMBER: 132:31743
TITLE: Gene **probes** used for genetic profiling in healthcare screening and planning
INVENTOR(S): Roberts, Gareth Wyn
PATENT ASSIGNEE(S): Genostic Pharma Limited, UK
SOURCE: PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964626	A2	19991216	WO 1999-GB1779	19990604
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9941586	A1	19991230	AU 1999-41586	19990604
AU 9941587	A1	19991230	AU 1999-41587	19990604
GB 2339200	A1	20000119	GB 1999-12914	19990604
GB 2339200	B2	20010912		
EP 1084273	A1	20010321	EP 1999-925207	19990604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.:

GB 1998-12098	A	19980606
GB 1998-28289	A	19981223
GB 1998-16086	A	19980724
GB 1998-16921	A	19980805
GB 1998-17097	A	19980807
GB 1998-17200	A	19980808
GB 1998-17632	A	19980814
GB 1998-17943	A	19980819
WO 1999-GB1779	W	19990604

AB There is considerable evidence that significant factor underlying the individual variability in response to disease, therapy and prognosis lies in a person's genetic make-up. There have been numerous examples relating that polymorphisms within a given gene can alter the functionality of the protein encoded by that gene thus leading to a variable physiol. response. In order to bring about the integration of genomics into medical practice and enable design and building of a technol. platform which will enable the everyday practice of mol. medicine a way must be invented for the DNA sequence data to be aligned with the identification of genes central to the induction, development, progression and outcome of disease or physiol. states of interest. According to the invention, the no. of genes and their configurations (mutations and polymorphisms) needed to be identified in order to provide crit. clin. information concerning individual prognosis is considerably less than the 100,000 thought to comprise the human genome. The identification of the identity of the core group of genes enables the invention of a design for genetic profiling

technologies.
IC ICM C12Q001-68
ICS C07K016-18
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9, 13, 14
ST **probe** genetic profiling healthcare screening
IT Ankyrins
Calmodulins
Notch (**receptor**)
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**1** and 2 and 3, core group of disease-**related genes**; gene **probes used** for genetic profiling in healthcare screening and planning)
IT Angiotensin receptors
Fibrillins
Neurofibromin
Presenilins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1 and 2, core group of disease-related **genes**; **gene probes** used **for genetic** profiling in healthcare screening and planning)
IT **Inositol** 1,4,5-trisphosphate receptors
P-glycoproteins
Uncoupling protein
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1 and 3, core group of **disease**-related genes; **gene probes used** for genetic profiling **in** healthcare screening and planning)
IT **Chloride** channel
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1 and 5 and KB, core group of disease-related genes; gene **probes used** for genetic profiling in healthcare screening and planning)
IT Calbindins
Keratins
Laminin receptors
Synaptobrevins
Syntaxins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**1**, core group of **disease**-related genes; gene **probes** used **for genetic profiling** in **healthcare** screening and planning)
IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(10, core group of disease-related genes; gene **probes used** for genetic profiling in healthcare screening and planning)
IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(11 and 2 and 3 and 9, core group **of** disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)
IT **Interleukin** receptors

RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(12, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**13**, core group of disease-related genes; gene **probes** used for genetic profiling in **healthcare** screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**14**, core group of disease-related genes; gene **probes** used for genetic profiling in **healthcare** screening and planning)

IT Myosins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(15 and 5A and 6 and 7A and cardiac, core group of disease-**related** genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(15, core group of **disease**-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(16, core group of disease-related genes; gene **probes** used for genetic **profiling** in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(17, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Antigens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(17-1A, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(18, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Melatonin receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1A and 1B, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Tropomyosins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1.alpha. and 3, core group of disease-related genes; **gene** probes used for genetic profiling in healthcare screening and planning)

IT Calculi, renal
(2, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Bone morphogenetic **proteins**
Synaptobrevins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(2, core group of disease-related genes; gene **probes** used for genetic profiling in **healthcare** screening and planning)

IT Bone morphogenetic **proteins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(2B, core group of disease-related genes; gene **probes** **used** for genetic profiling in healthcare screening and planning)

IT Cyclin dependent kinase inhibitors
(3, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Transcription factors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(3, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(4, core group of disease-related genes; gene **probes** used for **genetic** profiling in healthcare screening and planning)

IT Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5, core group of disease-related genes; gene **probes** used for genetic **profiling** in healthcare screening and planning)

IT Laminins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5, .alpha.3 and .beta.3 and .gamma.**2**, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT **5**-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT1A, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT **5**-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT1B, core group of disease-related genes; gene **probes** used for genetic profiling in **healthcare** screening and planning)

IT **5**-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT1C, core group of disease-related genes; gene **probes** used for **genetic** profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT1D, core group of disease-related genes; **gene** **probes** used for genetic profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT1E, core group of disease-related genes; **gene** probes used for genetic profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT1F, core group of disease-related genes; gene probes used for **genetic** profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT2A, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare **screening** and planning)

IT **5**-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT2B, core group of disease-related genes; gene **probes** used **for** genetic profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT2C, core group of disease-related **genes**; gene **probes** used for genetic profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT3, core group of disease-related genes; gene **probes** **used** for genetic profiling in healthcare screening and planning)

IT **5**-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT4, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT5, core group of disease-related genes; **gene** **probes** used for genetic profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT6, core group of disease-related genes; **gene** **probes** used for genetic profiling in healthcare screening and planning)

IT 5-HT receptors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(5-HT7, core group of disease-related **genes**; gene **probes** used for genetic profiling in healthcare screening and planning)

IT **Bone** morphogenetic **proteins**
Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL

(Biological study); USES (Uses)
(6, core group of disease-related genes; gene **probes** used for **genetic** profiling in healthcare **screening** and planning)

IT Bone morphogenetic **proteins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(7, core group of disease-related genes; gene probes used **for** genetic profiling in healthcare screening and planning)

IT Bone morphogenetic **proteins**
Keratins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(8, core group **of** disease-related genes; **gene probes** used for genetic profiling in **healthcare** screening and planning)

IT Apolipoproteins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(A, A4, **core** group of disease-related genes; gene **probes used** for genetic profiling in healthcare screening and planning)

IT Chromogranins
Cyclins
Glycophorins
Immunoglobulins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(A, core group **of** disease-related genes; gene **probes** used **for genetic profiling** in healthcare screening and planning)

IT **Apolipoproteins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(A-I, core group of disease-related genes; gene **probes** used for genetic **profiling** in healthcare screening and planning)

IT Apolipoproteins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(A-II, core group of disease-related genes; gene **probes** used for genetic profiling **in** healthcare screening and planning)

IT **Heat**-shock **proteins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(A1 and A2, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT **Transport proteins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ABC (ATP-binding cassette-contg.), 7, core group of disease-**related** genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Proteins, specific or class
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ABP (androgen-binding **protein**), core group of **disease**-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

IT Transport **proteins**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL

used for genetic profiling in healthcare screening and planning)
IT 9025-75-6, **Protein** phosphatase
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(regulatory subunit PPP1R3 and A, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)
IT 9001-78-9
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(tissue nonspecific TNSAP, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)
IT 79747-53-8, **Protein** tyrosine phosphatase
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(type 12, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)
IT 158736-49-3, .alpha.-Secretase
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.alpha. and .beta. and .gamma., core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)
IT 57285-09-3, Inhibin
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.alpha. and .beta.A and .beta.B and .beta.C subunits, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)
IT 9002-67-9, Luteinizing hormone
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.beta.-subunit, core group of disease-related genes; gene **probes** used for genetic profiling in healthcare screening and planning)

L24 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:454278 HCAPLUS
DOCUMENT NUMBER: 131:85125
TITLE: Method and device comprising capture molecule fixed on disc surface
INVENTOR(S): Remacle, Jose
PATENT ASSIGNEE(S): Belg.
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9935499	A1	19990715	WO 1998-BE206	19981224

W: AL, AM, AU, BA, BB, BG, BR, CA, CN, CU, CZ, DE, DE, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,

CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2312173	AA	19990715	CA 1998-2312173	19981224
AU 9920418	A1	19990726	AU 1999-20418	19981224
BR 9814726	A	20001017	BR 1998-14726	19981224
EP 1044375	A1	20001018	EP 1998-965057	19981224
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2002501174	T2	20020115	JP 2000-527830	19981224

PRIORITY APPLN. INFO.: US 1997-71726P P 19971230
WO 1998-BE206 W 19981224

AB The present invention is related to a method for the detection and/or the quantification of a target mol. by its binding with a non-cleavable capture mol. fixed on the surface of a disk comprising registered data. The present invention is also related to a disk having fixed upon its surface a non-cleavable capture mol., to its prepn. process, and to a diagnostic and/or reading device of said disk or comprising said disk. Cytomegalovirus and HIV DNA and bovine serum albumin were detected on compact disks (CDs). For DNA detection, capture probes were bound to aminated polycarbonate CDs. For protein detection, antibodies were fixed on a carboxylated CD. Detection involved using biotinylated DNA or antibodies, streptavidin-peroxidase, and TMB to give a blue color.

IC ICM G01N033-543
ICS C12Q001-68

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 10, 15, 73, 74, 80

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(aminated polycarbonate compact disk-immobilized, for DNA detection; method and device comprising capture mol. fixed on disk surface)

IT Polycarbonates, uses
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(aminated, compact disk of, capture **probe** immobilized on, for DNA detection; method and device comprising capture mol. fixed on disk surface)

IT Catalysts
Chromophores
Fluorescent substances
(as capture or **target mol.**; method and device comprising capture **mol.** fixed on disk surface)

IT Antibodies
Antigens
Carbohydrates, analysis
Haptens
Ligands
Lipids, analysis
Peptides, analysis
Proteins, general, analysis
Receptors
RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(as capture or **target mol.**; method and device comprising capture **mol.** fixed on disk surface)

IT Nucleic acids
RL: ANT (Analyte); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(as capture or **target mol.**; method and device comprising capture **mol.** fixed on disk surface)

IT Cytomegalovirus
Human immunodeficiency virus

(capture **probe** of, immobilization of, on aminated polycarbonate compact disk; method and device comprising capture mol. fixed on disk surface)

IT Precipitates
(detection of formation of, in detection of binding of **target** and capture **mols.**; method and device comprising capture **mol.** fixed on disk surface)

IT DNA
RL: ANT (Analyte); ANST (Analytical study)
(detection of, by aminated polycarbonate compact disk-immobilized capture **probe**; method and device comprising capture mol. fixed on disk surface)

IT Immunoassay
(**enzyme**-linked immunosorbent assay, bovine serum albumin detection by, on compact disk; method and device comprising capture mol. fixed on disk surface)

IT Magnetic particles
(in detection of binding of **target** and capture **mols** .; method and device comprising capture **mol.** fixed on disk surface)

IT Colloids
(metals, detection of formation of, in detection of binding of **target** and capture **mols.**; method and device comprising capture **mol.** fixed on disk surface)

IT Combinatorial chemistry
(new macromols. obtained by, as capture or **target mol** .; method and device comprising capture **mol.** fixed on disk surface)

IT Macromolecular compounds
RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(obtained by combinatorial chem., as capture or **target mol.**; method and device comprising capture **mol.** fixed on disk surface)

IT Corrosion
(of layer on disk surface, in detection of binding of **target** and capture **mols.**; method and device comprising capture **mol.** fixed on disk surface)

IT Metals, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(ppts., detection of formation of, in detection of binding of **target** and capture **mols.**; method and device comprising capture **mol.** fixed on disk surface)

IT 7440-22-4, Silver, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(ppts., detection of formation of, in detection of binding of **target** and capture **mols.**; method and device comprising capture **mol.** fixed on disk surface)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:317213 HCAPLUS
DOCUMENT NUMBER: 130:335007
TITLE: Extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte
INVENTOR(S): Nelson, Norman C.
PATENT ASSIGNEE(S): Gen-Probe Incorporated, USA
SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9923490	A1	19990514	WO 1998-US23088	19981030
W: AU, CA, JP, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6180340	B1	20010130	US 1997-962033	19971031
AU 9912918	A1	19990524	AU 1999-12918	19981030
AU 741568	B2	20011206		
EP 1027604	A1	20000816	EP 1998-956381	19981030
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
US 6350579	B1	20020226	US 2000-649636	20000828

PRIORITY APPLN. INFO.: US 1997-962033 A 19971031
WO 1998-US23088 W 19981030

AB Methods of detecting and/or quantifying an analyte in a single sample by using at least two labeled probes that specifically bind to different target regions of an analyte, and are labeled with labels that are distinguishable and/or present at different specific activities, are disclosed. Compns. comprising at least two labeled probes that specifically bind to different target regions of the same analyte and are labeled with labels that are distinguishable and/or present at different specific activities are disclosed. 1-Methyl-m-difluoroacridinium ester, 1-methylacridinium ester, and o-methoxy(cinnamyl)acridinium ester were shown to be distinguishable under conditions that replicate those of analyte detection using chemiluminescence. The three labels were used at a specific activity of 108, 106, and 104, resp.

IC ICM G01N033-543
ICS G01N033-53; G01N033-58; C12Q001-68

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 3

IT DNA
RNA
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analogs, as **probe**; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT Carbohydrates, analysis
Lipids, analysis
Nucleic acids
Proteins (general), analysis
RNA
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(as analyte or **probe**; extended dynamic range assays using at least two labeled **probes** for different **target** regions on an analyte)

IT Chemiluminescent substances
Chromophores
Fluorescent substances
Luminescent substances
Radioactive substances
(as detectable label; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT DNA

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(as **probe**; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT **Ligands**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(binding signal-producing binding partner, as detectable label; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT Analysis
Chemiluminescence spectroscopy
Fluorometry
Luminescence spectroscopy
Nucleic acid hybridization
Radiochemical analysis
Spectroscopy
(extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT Reaction kinetics
(labeled **probes** distinguishable by; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(labeled **probes**; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT **Enzymes**, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(or **enzyme** substrates, as detectable label; extended dynamic range assays using at least two labeled **probes** for different **target** regions on an analyte)

IT 22559-71-3D, Acridinium, ester derivs.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(as detectable label; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT 224169-61-3 224169-63-5 224169-64-6
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(as detectable label; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

IT 224169-65-7DP, conjugates with oligonucleotide **probe**
224169-66-8DP, conjugates with oligonucleotide **probe**
224169-67-9DP, conjugates with oligonucleotide **probe**
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(for synthetic RNA oligomer detn.; extended dynamic range assays using at least two labeled **probes** for different target regions on an analyte)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:34437 HCAPLUS
DOCUMENT NUMBER: 130:107243
TITLE: Methods of detection using a cellulose binding domain fusion product

INVENTOR(S): Shoseyov, Oded; Shpiegl, Itai; Goldstein, Marc A.; Doi, Roy H.
PATENT ASSIGNEE(S): Yissum Research Development Company of the Hebrew University of Jerusalem, Israel; The University of California
SOURCE: U.S., 63 pp., Cont.-in-part of U.S. 5,496,934.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5856201	A	19990105	US 1994-330394	19941027
US 5496934	A	19960305	US 1993-48164	19930414
CA 2160670	AA	19941027	CA 1994-2160670	19940414
CN 1125452	A	19960626	CN 1994-192440	19940414
CN 1059214	B	20001206		
US 5670623	A	19970923	US 1995-460462	19950602
US 5719044	A	19980217	US 1995-460457	19950602
US 5738984	A	19980414	US 1995-460458	19950602
US 5837814	A	19981117	US 1995-460455	19950602
CN 1217339	A	19990526	CN 1998-118445	19980813
CN 1223377	A	19990721	CN 1998-118443	19980813

PRIORITY APPLN. INFO.: US 1993-48164 A2 19930414

AB A cellulose binding domain (CBD) having a high affinity for cryst. cellulose and chitin is disclosed, along with methods for the mol. cloning and recombinant prodn. thereof. Fusion products comprising the CBD and a second protein (binding to target substances) are likewise described. The fusion products are useful in detecting target substances. IgG was purified from human serum using recombinantly-prepd. CBD-protein A fusion product bound to cellulose.

IC ICM G01N033-52
ICS G01N033-58; G01N033-68
NCL 436501000
CC 9-2 (Biochemical Methods)
Section cross-reference(s): 3, 15
ST cellulose binding domain fusion **protein** analysis; IgG purifn cellulose binding domain fusion **protein** A
IT Serum (blood)
(IgG of human purifn. from, by cellulose binding domain-**protein** A cellulose; methods of detection using cellulose binding domain fusion products)
IT Escherichia coli
(cellulose binding domain **protein** and fusion products expression in; methods of detection using cellulose binding domain fusion products)
IT **Proteins** (specific **proteins** and subclasses)
RL: ARG (Analytical reagent use); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(cellulose-binding domain, fusion products with **proteins** binding **target** substances; methods of detection using cellulose binding domain fusion products)
IT Chimeric genes
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for fusion **proteins** contg. cellulose binding domain; methods of detection using cellulose binding domain fusion products)
IT **Protein** A

RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BPR (Biological process); BUU (Biological use, unclassified); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(fusion products with cellulose binding domain **protein**; methods of detection using cellulose binding domain fusion products)

IT Antibodies
RL: ARG (Analytical reagent use); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(fusion products with cellulose binding domain **protein**; methods of detection using cellulose binding domain fusion products)

IT PCR (polymerase chain reaction)
(in prepn. of cellulose binding domain **protein** fusion products; methods of detection using cellulose binding domain fusion products)

IT **Proteins** (specific **proteins** and subclasses)
RL: ARG (Analytical reagent use); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(**ligand**-binding, fusion products with cellulose-binding domain **protein**; methods of detection using cellulose binding domain fusion products)

IT Antibodies
Hormones (animal), analysis
Nucleic acids
Peptides, analysis
Proteins (general), analysis
RL: ANT (Analyte); ANST (Analytical study)
(methods of detection using cellulose binding domain fusion products)

IT Fusion **proteins** (chimeric **proteins**)
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(of cellulose-binding domain **protein** and **proteins** binding **target** substances; methods of detection using cellulose binding domain fusion products)

IT **Enzymes**, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(or substrate or cofactor or inhibitor of, as label; methods of detection using cellulose binding domain fusion products)

IT **Protein** HSP60
RL: BPN (Biosynthetic preparation); BPR (Biological process); BIOL (Biological study); PREP (Preparation); PROC (Process)
(peptide of, fusion products with cellulose binding domain **protein**; methods of detection using cellulose binding domain fusion products)

IT IgG
RL: BPR (Biological process); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); PROC (Process)
(purifn. of, by cellulose binding domain-**protein** A cellulose; methods of detection using cellulose binding domain fusion products)

IT 506-68-3, Cyanogen bromide ((CN)Br)
RL: NUU (Other use, unclassified); USES (Uses)
(HSP60 peptide fusion product with cellulose binding domain **protein** cleavage with; methods of detection using cellulose binding domain fusion products)

IT 133554-23-1DP, fusion products with cellulose binding domain **protein** CBD1
RL: BPN (Biosynthetic preparation); PRP (Properties); RCT (Reactant); BIOL (Biological study); PREP (Preparation)
(amino acid sequence, cyanogen bromide cleavage of; methods of

detection using cellulose binding domain fusion products)
IT 160478-79-5DP, 28-189-**Protein** CbpA (Clostridium cellulovorans clone pCB1 gene cbpA cellulose-binding precursor reduced), fusion products with **proteins** binding **target** substances 219591-04-5DP, fusion products with **proteins** binding **target** substances 219591-05-6DP, fusion products with **proteins** binding **target** substances
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BPR (Biological process); PRP (Properties); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(amino acid sequence; methods of detection using cellulose binding domain fusion products)
IT 9003-99-0D, Peroxidase, fusion products with cellulose binding domain **protein**
RL: ARG (Analytical reagent use); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(horseradish; methods of detection using cellulose binding domain fusion products)
IT 58-85-5D, Biotin, conjugates with **probe** bound to targetable mol.
RL: ANT (Analyte); ANST (Analytical study)
(methods of detection using cellulose binding domain fusion products)
IT 1398-61-4, Chitin 9001-78-9D, fusion products with cellulose binding domain **protein** 9013-20-1D, Streptavidin, fusion products with cellulose binding domain **protein**
RL: ARG (Analytical reagent use); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(methods of detection using cellulose binding domain fusion products)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:8005 HCAPLUS
DOCUMENT NUMBER: 130:77958
TITLE: sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clinical diagnosis
INVENTOR(S): Limper, Andrew H.; Leof, Edward B.; Thomas, Charles F.; Gustafson, Michael P.
PATENT ASSIGNEE(S): Mayo Foundation for Medical Education and Research, USA
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9856799	A1	19981217	WO 1998-US12100	19980612
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5863741	A	19990126	US 1997-874347	19970613
US 6015700	A	20000118	US 1998-93522	19980608
PRIORITY APPLN. INFO.:			US 1997-874347	19970613

AB A nucleic acid and corresponding polypeptide that aids in the regulation of the cell cycle in Pneumocystis carinii is described. Antibodies generated against a unique carboxyl-terminus region of the polypeptide have specific binding affinity for P. carinii Cdc2 polypeptide and are

beneficial in diagnosing and monitoring P. carinii infection in patients. Expression of P. carinii Cdc2 polypeptide in cdc2-mutant yeast and other cdc-mutant organisms provides a useful model for studying the life cycle of P. carinii and for identifying novel therapeutics.

IC ICM C07H017-00
ICS C12N005-00; C12N015-00; C07K014-00; C12Q001-00; C12Q001-68

CC 7-2 (Enzymes)
Section cross-reference(s): 3, 10

IT Cyclins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(B, phosphorylation **target** for Cdc2 kinase indicating functionality; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Nucleic acid hybridization
(DNA-DNA; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Histones
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(H1, phosphorylation **target** for Cdc2 kinase indicating functionality; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Transcription factors
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(Rb, phosphorylation **target** for Cdc2 kinase indicating functionality; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT PCR (polymerase chain reaction)
(diagnosis involving; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Genetic vectors
Schizosaccharomyces pombe
(expression host Schizosaccharomyces pombe expression vector; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Saccharomyces cerevisiae
(expression host; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(gene CDC25, phosphorylation **target** for Cdc2 kinase indicating functionality; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(gene cdc25, phosphorylation **target** for Cdc2 kinase indicating functionality; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for

mutation screening for clin. diagnosis)

IT Animal tissue
Body fluid
(infection diagnosis in; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Infection
(method for diagnosis of; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Antibodies
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal, specific for C-terminal domain; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(nuclear lamin-assocd.; phosphorylation **target** for Cdc2 kinase indicating functionality; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Phosphorylation, biological
(**protein**, method for detection of phosphorylation activity inhibition; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Cell cycle
DNA sequences
Epitopes
Pneumocystis carinii
Protein sequences
cDNA sequences
(sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(sequence and development-specific **activity** of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT Development, microbial
(trophozoite, high Cdc2 kinase activity during; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT 218269-64-8
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(amino acid sequence of epitope specific for monoclonal antibody; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT 206010-93-7, Kinase (phosphorylating), gene cdc2 **protein** (Pneumocystis carinii)

RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT 199151-54-7 218438-99-4
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT 143375-65-9, Cdc2 **protein** kinase
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

IT 9012-90-2
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.alpha., .alpha., .alpha.; phosphorylation **target** for Cdc2 kinase indicating functionality; sequence and development-specific activity of Cdc2 **protein** kinase from Pneumocystis carinii and methods for mutation screening for clin. diagnosis)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:106052 HCAPLUS
DOCUMENT NUMBER: 128:163644
TITLE: A homogeneous nucleic acid detection method utilizing simultaneous target and signal amplification
INVENTOR(S): Hepp, Jozsef; Lengyel, Zsolt; Pande, Rajiv; Botyanszki, Janos; Sahin-Toth, Miklos
PATENT ASSIGNEE(S): Navix, Inc., USA; Hepp, Jozsef; Lengyel, Zsolt; Pande, Rajiv; Botyanszki, Janos; Sahin-Toth, Miklos
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9804739	A2	19980205	WO 1997-US12415	19970716
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5858665	A	19990112	US 1996-692825	19960725
AU 9736668	A1	19980220	AU 1997-36668	19970716
AU 728416	B2	20010111		
EP 918883	A2	19990602	EP 1997-933502	19970716
R: BE, CH, DE, FR, GB, IT, LI, NL, SE, IE				

PRIORITY APPLN. INFO.: US 1996-692825 A 19960725

WO 1997-US12415 W 19970716

AB A method for detg. the presence of a target nucleic acid in a sample using a two-stage target cycling reaction is described. The method uses a hybridization probe that is complexed with an activator. When the probe hybridizes with its target the activator is released. The activator then interacts with an analog of the target sequence that is immobilized via an anchor moiety, leading to its release and the generation of a signal specific to the released cleavage products. The released target analog then restarts the cyclic reaction by binding to a second probe, which effectuates release of a second activator, and so on. This cyclic reaction amplifies the signal generated from a single target nucleic acid mol. in the sample, which greatly enhances the level of target detection that can be expected. The analog and the target have to be sepd. in the assay and this can be brought about by immobilizing them on sep. surfaces or using a membrane that is permeable to the released activator and target analog, but not the target or the free probe. An enzyme-based version of the assay is demonstrated. An oligonucleotide probe with a central oligoribonucleotide was prepd., conjugated with enterokinase, and immobilized. The anchored target analog was conjugated to trypsinogen. When the target sequence hybridizes to the enterokinase labeled probe, it is cleaved at the RNA moiety with RNase H to release the enterokinase. The released enterokinase cleaves the trypsinogen to release the oligonucleotide. The resulting trypsin can be assayed with a chromogenic substrate.

IC ICM C12Q001-68

CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9

ST target cycling reaction hybridization amplification; **probe** conjugate cleavage activation signal amplification; enterokinase **probe** conjugate signal amplification; trypsinogen activation signal amplification

IT **Functional groups**
(guanidino **group**, stabilization of **proteins** using; homogeneous nucleic acid detection method utilizing simultaneous **target** and signal amplification)

IT Polysaccharides, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(immobilized conjugates with oligonucleotides, **enzymic** hydrolysis in signal generation and amplification; homogeneous nucleic acid detection method utilizing simultaneous target and signal amplification)

IT **Probes** (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(mixed compn., conjugates; homogeneous nucleic acid detection method utilizing simultaneous target and signal amplification)

IT Polyoxyalkylenes, uses
RL: NUU (Other use, unclassified); USES (Uses)
(stabilization of **proteins** using; homogeneous nucleic acid detection method utilizing simultaneous **target** and signal amplification)

IT 9001-92-7D, Proteinase, conjugates with hybridization **probes**
9014-74-8D, Enterokinase, conjugates with hybridization **probes**
RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(in signal generation and amplification; homogeneous nucleic acid detection method utilizing simultaneous target and signal amplification)

IT 25322-68-3, Polyethylene glycol
RL: NUU (Other use, unclassified); USES (Uses)
(stabilization of **proteins** using; homogeneous nucleic acid

detection method utilizing simultaneous **target** and signal amplification)

L24 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:294518 HCAPLUS
DOCUMENT NUMBER: 126:273240
TITLE: Nucleic acid reactions under isothermal conditions where a **probe-target** nucleic acid duplex reacts with an **enzyme** and single-strand-binding **ligand** facilitates thermodynamic cycling of the system
INVENTOR(S): Lane, Michael J.; Benight, Albert S.; Faldasz, Brian D.
PATENT ASSIGNEE(S): Lane, Michael J., USA; Benight, Albert S.; Faldasz, Brian D.
SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9711199	A1	19970327	WO 1996-US15199	19960923
W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
AU 9673685	A1	19970409	AU 1996-73685	19960923
PRIORITY APPLN. INFO.:			US 1995-532310	19950922
			US 1996-635067	19960419
			WO 1996-US15199	19960923

AB This invention describes thermodn. cycling reaction methods for a single-stranded target nucleic acid which has bound by a single-stranded probe nucleic acid and its reaction with an enzyme such as Taq polymerase, DNA ligase, or RNaseH. The reaction mixt. comprises a plurality of single-stranded nucleic acid probes, at least one single-stranded nucleic acid target, a single-strand-binding ligand to facilitate thermodn. cycling of the system and an enzyme such as RNaseH which has the chem. potential of the single-strand-binding ligand. The thermodn. cycling reaction occurs under isothermal conditions. Reaction steps include (a) the formation of a probe-target nucleic acid duplex (b) a reaction between the enzyme and the first formed duplex, (c) the dissoln. of the first formed duplex, (d) the formation of a second duplex between a subsequent probe and target and (e) a reaction between the enzyme and the second formed duplex. The reaction cycles at least at least 1 time, and may cycle 2, 5, 10, 25, 50, 100, 500, 103, 104, 105, or 106 times. Examples of applications of the method include isothermal PCR and improved ligase chain reactions.

IC ICM C12Q001-68
CC 3-1 (Biochemical Genetics)
ST nucleic acid reaction isothermal thermodn cycling; amplification nucleic acid isothermal thermodn cycling; RNaseH nucleic acid reaction thermodn cycling; PCR isothermal thermodn cycling reaction; ligase chain reaction thermodn cycling reaction; single strand binding **ligand** thermodn cycling

IT Chemical potential
(**enzyme** and single-strand binding **ligand**; nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT PCR (polymerase chain reaction)
(isothermal; nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT Genetic methods
(ligase chain reaction; nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT Nucleic acid amplification (method)
Thermodynamics
(nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT **Enzymes**, properties
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT **Protein** SSB
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT Nucleic acids
RL: RCT (Reactant)
(nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT Oligonucleotides
RL: NUU (Other use, unclassified); USES (Uses)
(**probes**; nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT **Ligands**
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(single-strand-binding; nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT 9012-90-2, DNA polymerase
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(Taq; nucleic acid reactions under isothermal conditions where **probe-target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)
IT 9015-85-4, DNA ligase 9050-76-4, RNaseH 63774-49-2, RNase H*
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)

(nucleic acid reactions under isothermal conditions where **probe -target** nucleic acid duplex reacts with **enzyme** and single-strand-binding **ligand** facilitates thermodn. cycling of system)

L24 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:576736 HCAPLUS
DOCUMENT NUMBER: 115:176736
TITLE: Amplification capture assay
INVENTOR(S): Brakel, Christine L.; Spadoro, Joanne P.
PATENT ASSIGNEE(S): Enzo Biochem, Inc., USA
SOURCE: Eur. Pat. Appl., 40 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 435150	A2	19910703	EP 1990-124738	19901219
EP 435150	A3	19920129		
R: DE, ES, FR, GB, IT				
CA 2032203	AA	19910630	CA 1990-2032203	19901213
EP 1113082	A2	20010704	EP 2000-126204	19901219
R: DE, ES, FR, GB, IT				
JP 04141099	A2	19920514	JP 1990-418011	19901228
JP 2000325093	A2	20001128	JP 2000-118781	19901228

PRIORITY APPLN. INFO.: US 1989-459030 A 19891229
EP 1990-124738 A3 19901219
JP 1990-418011 A3 19901228

AB A method for detecting single-stranded nucleic acids in a sample based on nucleic acid amplification and use of a matrix-bound oligonucleotide and an oligonucleotide-label capturing moiety conjugate is described. The method is adaptable to high vol. and clin. testing, e.g. it is adaptable to automation. Addnl., it can be modified to provide ests. of the efficiency of amplification. The process comprises (1) amplification of the target nucleic acid; (2) contacting the amplified nucleic acid with a target-specific hybridization probe attached to a label-capturing moiety (such as biotin or streptavidin); (3) contacting the amplified nucleic acid with a matrix-attached 2nd oligonucleotide hybridization probe specific for the target; (4) sepg., if necessary, the bound complex from unbound nucleic acid; and (45) detg. the presence or absence of the amplified target nucleic acid by capturing and observing the presence or absence of the label (e.g. with a biotin- or streptavidin-enzyme complex). Alternatively, the target nucleic acid can first be captured with a matrix-oligonucleotide conjugate and sepd. from unbound nucleic acids. Using this method, as little as 1 copy of HIV/1.5 .times. 105 peripheral blood cells could be detected.

IC ICM C12Q001-68
ICS C07H021-04; C12Q001-70
CC 3-5 (Biochemical Genetics)
IT Agglutinins and Lectins
Antibodies
Antigens
Hormones
Receptors
RL: BIOL (Biological study)
(oligonucleotide hybridization **probe** conjugates, in detection of amplified target nucleic acids, capture **probes** in relation

to)
IT Virus, animal
(Epstein-Barr, detection of, nucleic acid amplification and oligonucleotide **probe** conjugates in)
IT **Enzymes**
RL: BIOL (Biological study)
(apo-, conjugates, with oligonucleotide hybridization **probes**, in detection of amplified **target** nucleic acids, capture **probes** in relation to)
IT Avidins
RL: BIOL (Biological study)
(conjugates, with oligonucleotide hybridization **probe**, in detection of amplified target nucleic acids, capture **probes** in relation to)
IT Carbohydrates and Sugars, compounds
Coenzymes
RL: BIOL (Biological study)
(conjugates, with oligonucleotide hybridization **probes**, in detection of amplified target nucleic acids, capture **probes** in relation to)
IT Virus, animal
(human immunodeficiency 1, detection of, nucleic acid amplification and oligonucleotide **probe** conjugates in)
IT Nucleotides, polymers
RL: BIOL (Biological study)
(oligo-, conjugates, with matrix, with **ligand** or receptor, in detection of nucleic acids, nucleic acid amplification in relation to)
IT 58-85-5D, Biotin, conjugate with oligonucleotide hybridization **probe** 9013-20-1D, Streptavidin, conjugate with oligonucleotide hybridization **probe**
RL: PRP (Properties)
(in detection of amplified target nucleic acids, capture **probes** in relation to)
IT 9012-90-2, DNA polymerase
RL: BIOL (Biological study)
(nucleic acid amplification with, in detection of target nucleic acid, capture **probes** in relation to)
IT 9026-28-2, Q.beta. Replicase 9068-38-6, Reverse transcriptase
RL: PRP (Properties)
(nucleic acid amplification with, in detection of target nucleic acid, capture **probes** in relation to)
IT 136541-95-2 136541-96-3
RL: PRP (Properties)
(oligonucleotide **probe** for detection of amplified Epstein-Barr virus sequence)
IT 136542-08-0 136542-09-1
RL: PRP (Properties)
(oligonucleotide **probe** for detection of amplified HIV sequence)

L24 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:229742 HCAPLUS
DOCUMENT NUMBER: 112:229742
TITLE: DNA and RNA molecules stabilized by modifications of the 3'-terminal phosphodiester linkage and their use as nucleic acid **probes** and as therapeutic agents to block the expression of specifically targeted genes
INVENTOR(S): Walder, Joseph A.; Walder, Roxanne Y.; Eder, Paul S.; Dagle, John M.

PATENT ASSIGNEE(S): University of Iowa Research Foundation, USA
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8905358	A1	19890615	WO 1988-US3842	19881031
W: AU, JP				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8927829	A1	19890705	AU 1989-27829	19881031
AU 620364	B2	19920220		
EP 348458	A1	19900103	EP 1988-910300	19881031
EP 348458	B1	19970409		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 02502516	T2	19900816	JP 1988-509389	19881031
JP 3019994	B2	20000315		
AT 151467	E	19970415	AT 1988-910300	19881031
CA 1339935	A1	19980630	CA 1988-582338	19881104
US 5491133	A	19960213	US 1991-672088	19910319
US 5403711	A	19950404	US 1993-88622	19930706
US 6197944	B1	20010306	US 1994-268381	19940629
US 5962425	A	19991005	US 1995-460704	19950602

PRIORITY APPLN. INFO.:
US 1987-126564 A 19871130
US 1988-173127 B1 19880324
WO 1988-US3842 A 19881031
US 1991-672088 A3 19910319
US 1991-757555 B1 19910911

AB The invention comprises the method, means, and compn. which together enable the use of oligonucleotides that are modified at the 3'-terminal phosphodiester linkage, and are thereby rendered resistant to degrdn. within cells and body fluids, to selectively block the expression of a particular gene. The method involves the hybridization of the modified oligonucleotide to the corresponding mRNA to form a substrate fully capable of being recognized by the enzyme RNaseH, followed by the cleavage of the mRNA at the site of the RNA-DNA double helix such that the expression of the targeted gene is blocked. The invention further details the use of DNA and RNA mols. modified at the 3'-terminal phosphodiester linkage as nucleic acid probes for diagnostic applications. Anti-c-myc oncogene oligonucleotide, 5'-GXTAGGGAAAGACCACTGAGGGTXC [X = trichlorodimethylethylphosphotriester (incorporation method described)], at 1 .mu.M, decreased the level of c-myc mRNA in MOPC 315 cells by 75% compared to the steady-state level of the mRNA in MOPC 315 cells incubated in the absence of the oligonucleotide.

IC C12Q001-68; C07H211-00
CC 1-12 (Pharmacology)
Section cross-reference(s): 3, 9, 33
ST phospodiester modification DNA stabilization; RNA stabilization phosphodiester modification; nucleic acid stabilization phosphodiester modification; oligonucleotide **probe** nuclease resistance; gene expression blockage phosphodiester modification
IT **Protein** formation
(inhibition of, modified oligonucleotides to **target** mRNA in)
IT Diagnosis
Nucleic acid hybridization
(nuclease-resistant oligonucleotide **probes** for)
IT **Functional groups**

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WO 8905358	A1	19890615	WO 1988-US3842	19881031
W: AU, JP				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
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AU 620364	B2	19920220		
EP 348458	A1	19900103	EP 1988-910300	19881031
EP 348458	B1	19970409		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
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(phosphodiester, of 3'-terminal linkage in oligonucleotide, modification of, for gene expression inhibition)